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VOLUME XXXII
1963

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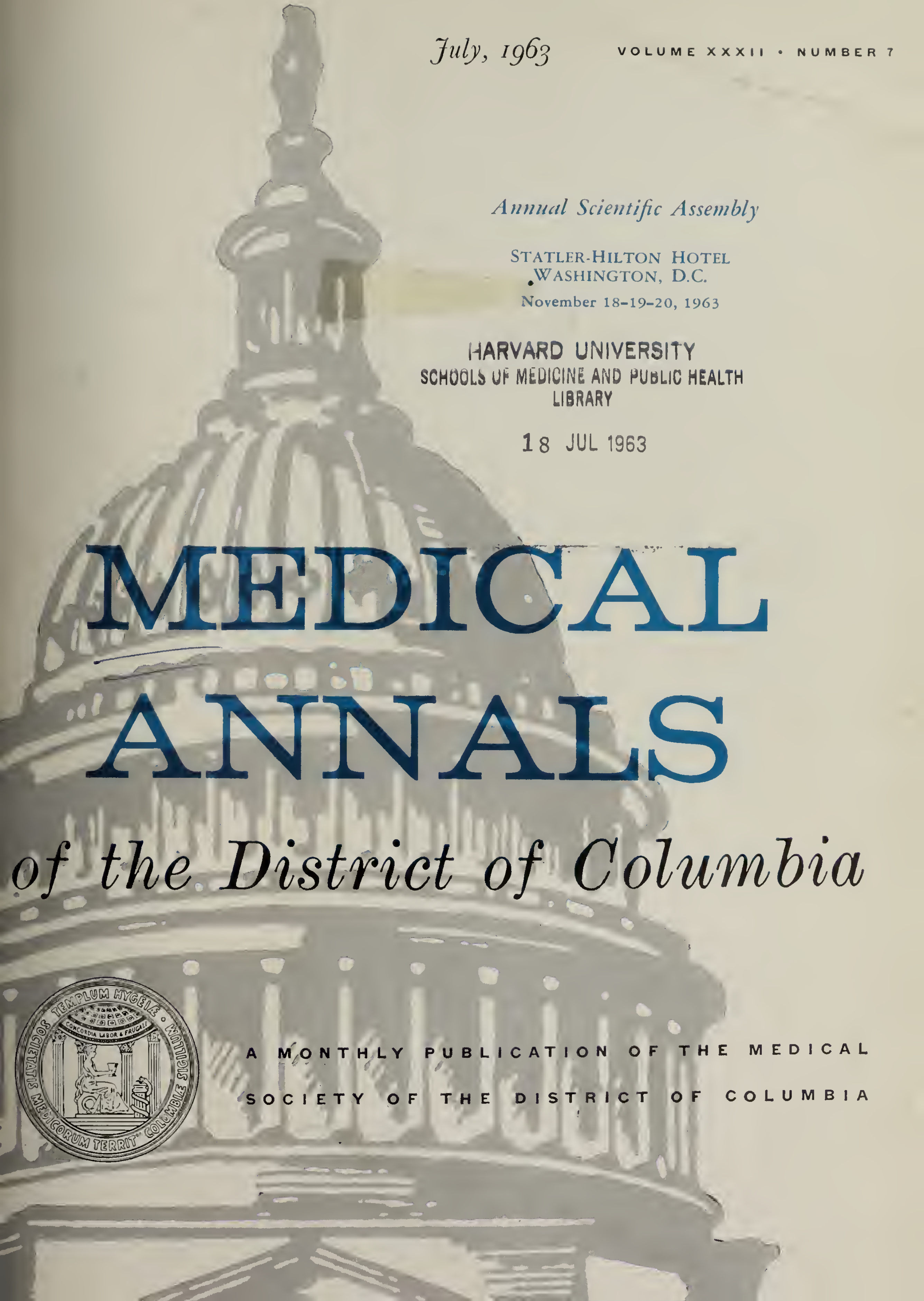

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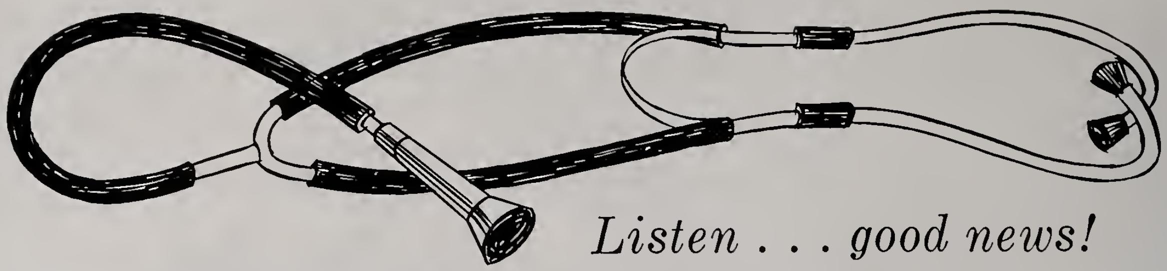

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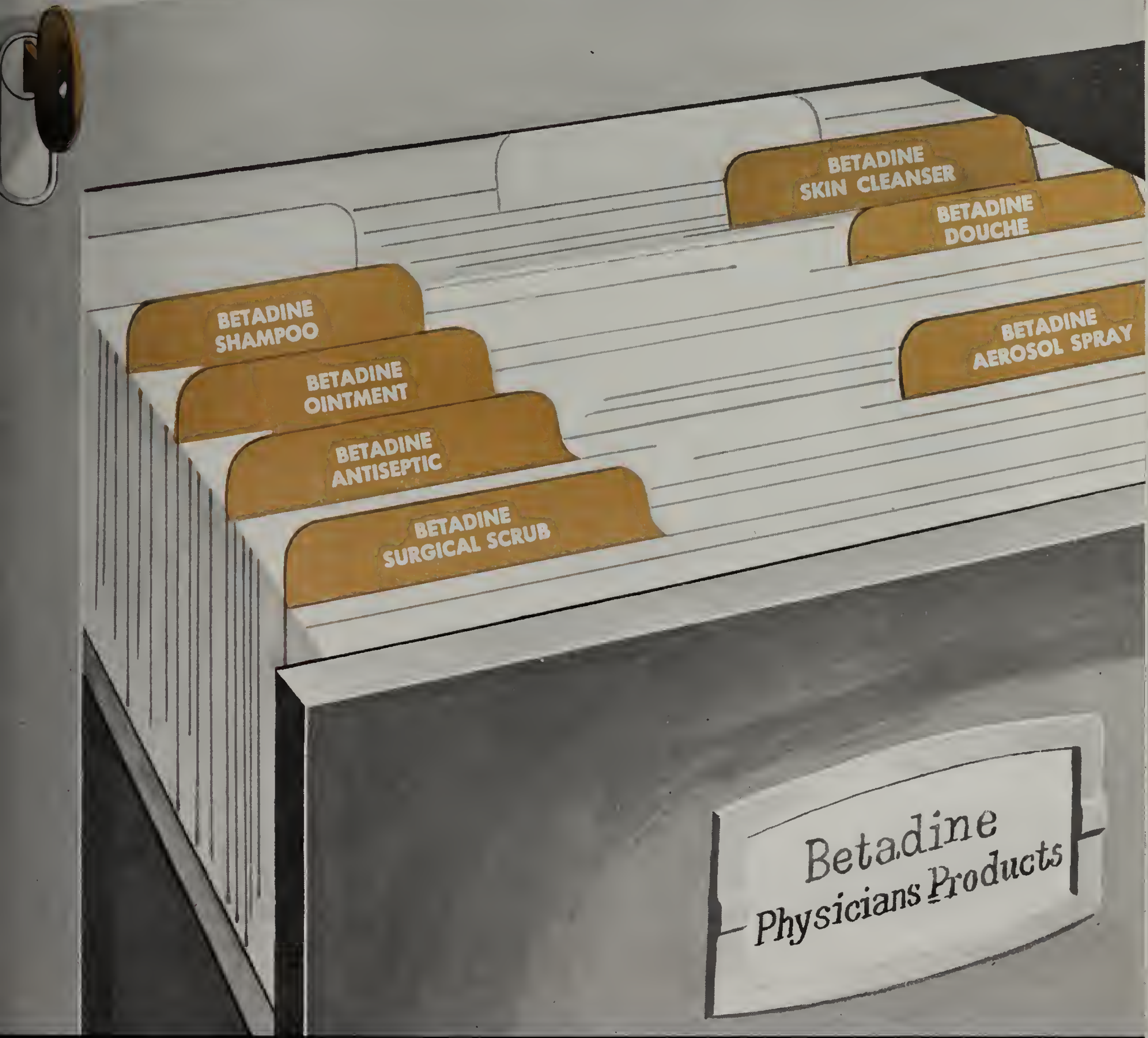
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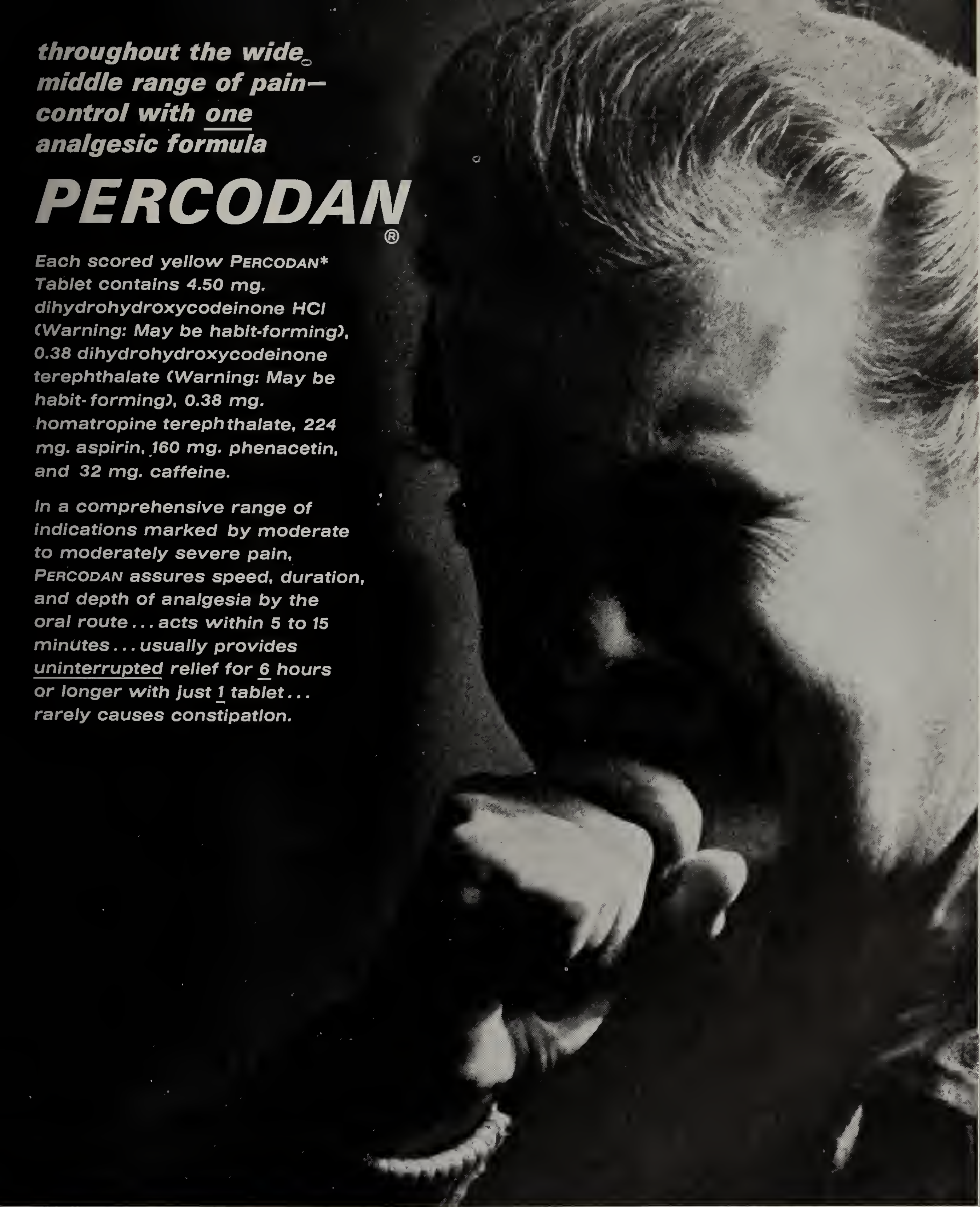

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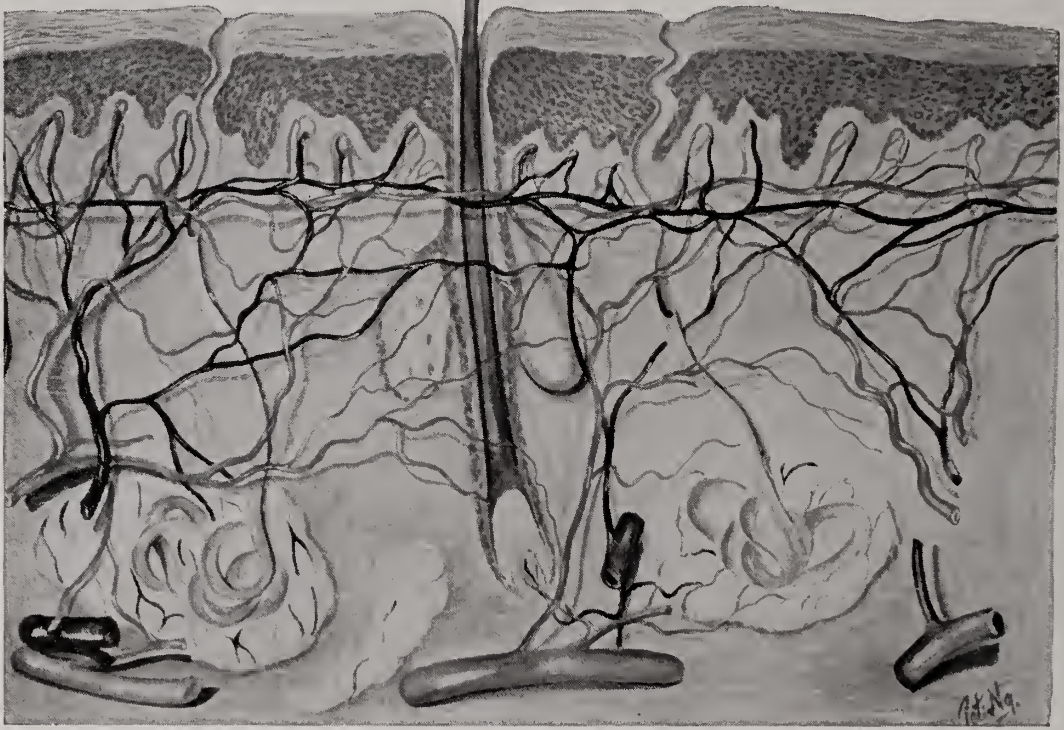

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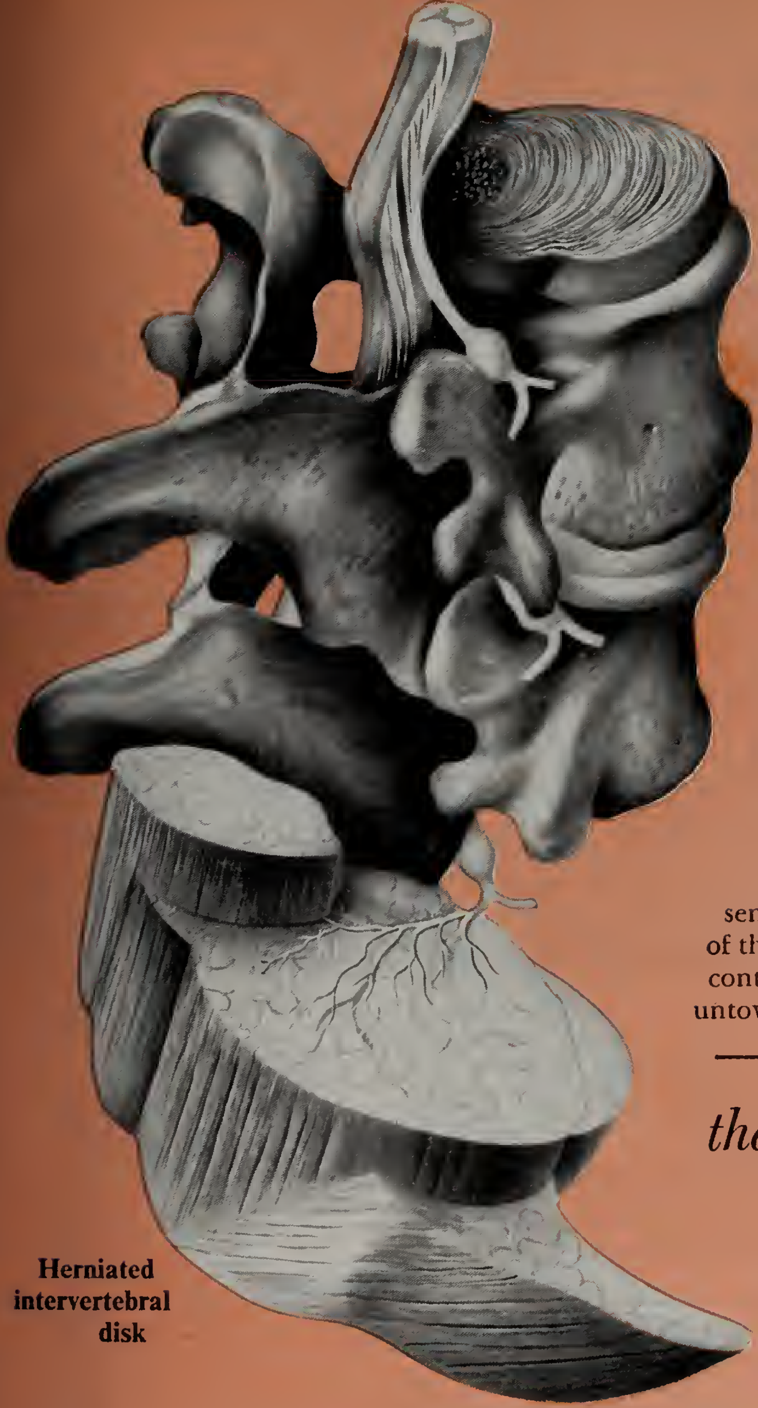

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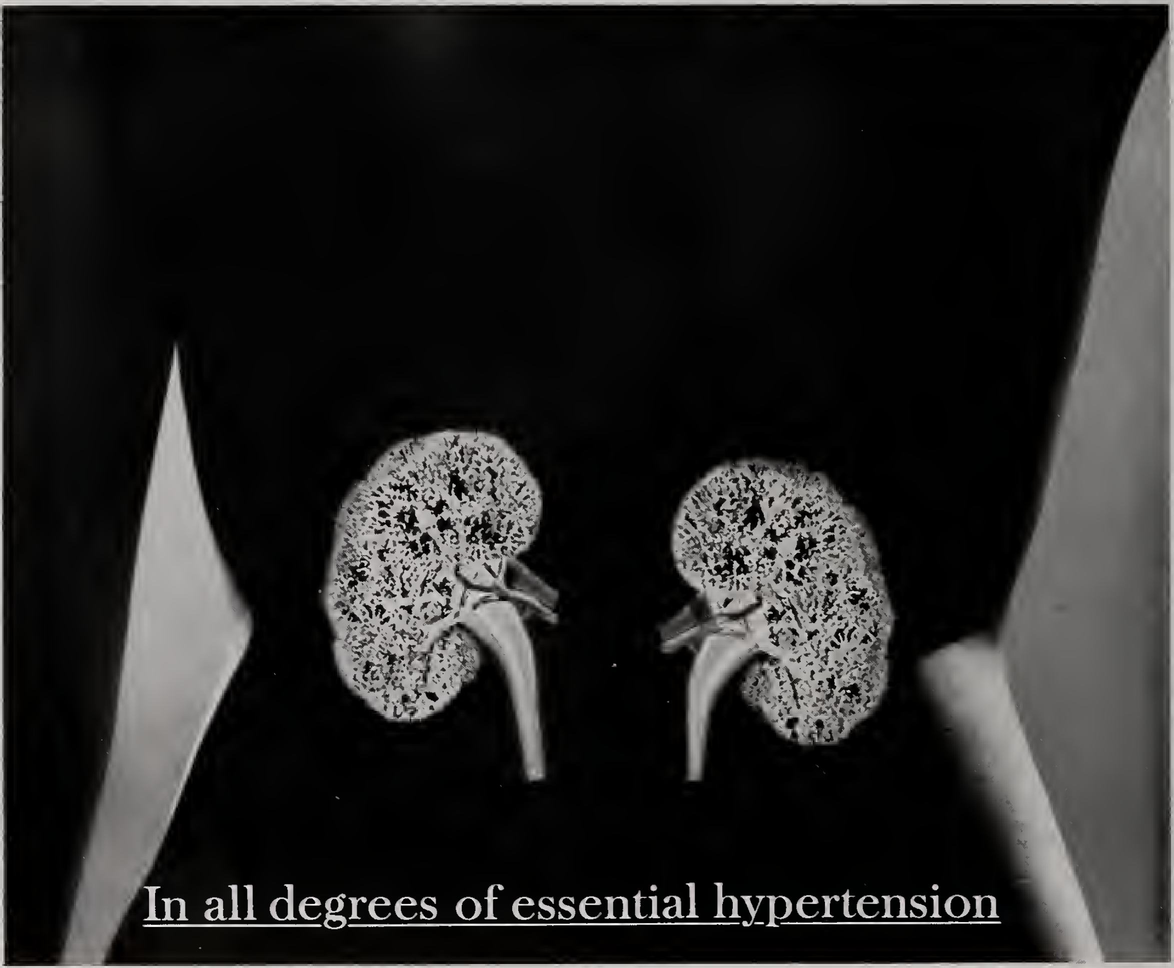

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References: (1) Moyer, J. H., and Heider, C.: Am. J. Cardiol. *9*:920 (June) 1962. (2) Brest, A. N., and Moyer, J. H.: Pennsylvania M. J. *63*:545 (Apr.) 1960. (3) Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. *10*:516 (June) 1962. (4) Hutchison, J. C.: Current Therap. Res. *4*:610 (Dec.) 1962. (5) Feldman, L. H.: North Carolina M. J.: *23*:248 (June) 1962.

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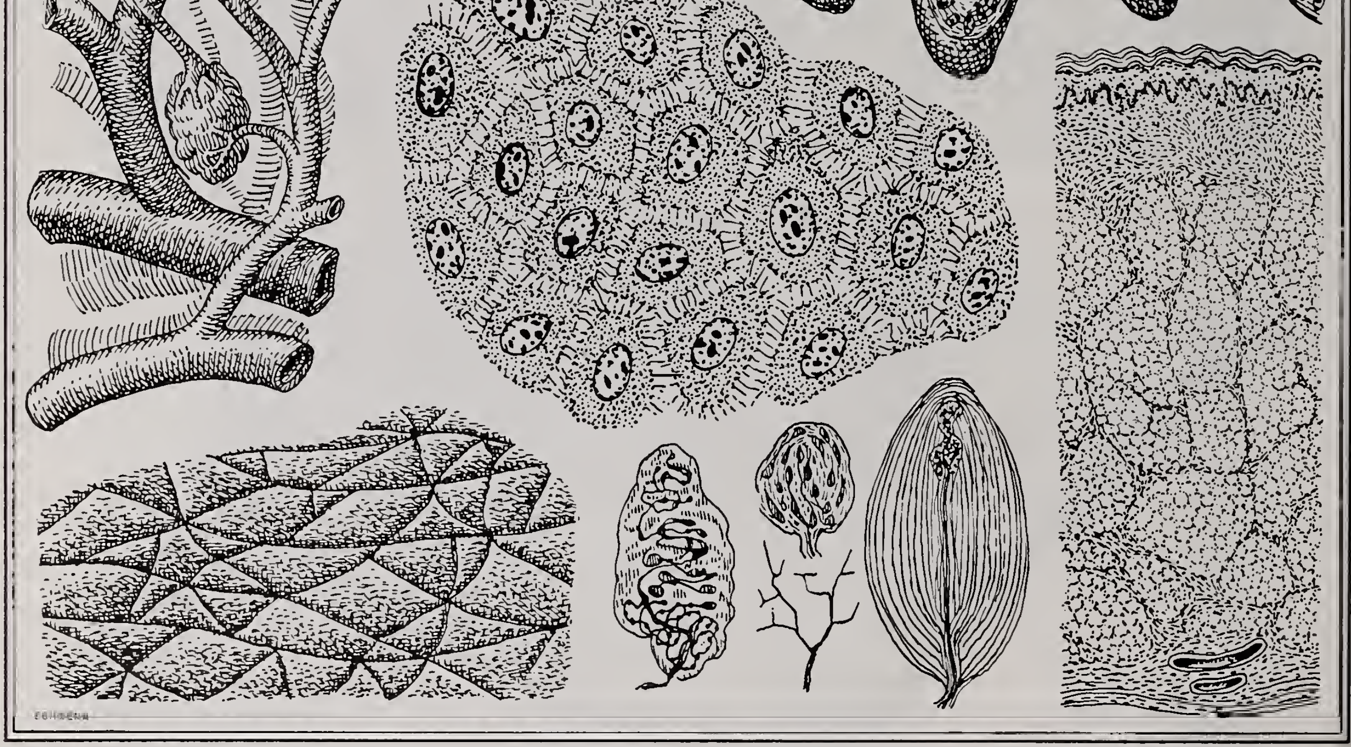

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BOOK REVIEWS

Medical Laboratory Technology. Matthew J. Lynch, M.D. (N.U.I.), M.R.C.P. (Lond.), F.C.A.P., Stanley S. Raphael, M.B., B.S. (Lond.), Leslie D. Mellor, L.C.S.L.T., F.I.M.L.T., Peter D. Spare, F.I.M.L.T., Peter Hills, L.C.S.L.T., F.R.M.S., and Martin J. H. Inwood, L.C.S.L.T., F.I.M.L.T. Price, $12.00. Pp. 735, illustrated. Philadelphia: Saunders, 1963.

With the number of fine books in existence, in recent editions, in the field of laboratory medicine, a new book covering this area needs justification. This new book has several. It is reasonably and modestly priced through the use of a photographic method of printing on paper of fair quality. The print is large and clear, as are most of the many illustrations. Its sturdy and attractive cover should withstand hard use in the laboratory. Another justification of the book is its treatment of several areas which are often not included in volumes on laboratory technique. Among these are detailed sections on histologic and cytologic methods, so that it is useful to the tissue pathologist as well as to the clinical pathologist.

The material is by and large clearly and logically presented, but there is some variability in the quality and detail of treatment in different sections. The contents are up to date and cover almost the full range of laboratory medicine. Many unusual techniques which are normally not carried out in a general hospital laboratory are included, although there is no discussion of chromosome counting.

The emphasis throughout is heavily on laboratory techniques, as the book's name indicates, with only a glancing treatment of the interpretation of laboratory tests. Therefore, the volume will be much more valuable to pathologists and laboratory technicians than to clinicians. "Medical Laboratory Technology" has much to recommend it and is a worthy and useful addition to the literature on this topic.

Frank N. Miller, M.D.

The Management of the Anxious Patient. Ainslie Meares, M.D., B.Agr. Sc., D.P.M. Price, $9.00. Pp. 493. Philadelphia: Saunders, 1963.

The preface of this book states that it is directed to "the general practitioner, the student, and all those who have professional dealings with the anxious patient." In this lies its main assets and liabilities. The book gives a comprehensive survey of various aspects and manifestations of anxiety as it may appear in different patients, with varying diagnostic categories, and the author's suggestions for management of these patients based on his personal experiences. The descriptions are frequently short, clear and pertinent.

However, in general, the language of the book is too simple and at times naïve. Explanations are limited and no references are given. The author does little more than state his personal theories without supplying the necessary and adequate amounts of data to substantiate them. The theory of "atavistic regression" appears to be a reformulation in the author's personal language of phenomena previously well described and documented under different names. The book contains several inaccuracies and at least one recommended technique which has fallen into disrepute with a majority of psychiatrists.

Edward I. Kushner, M.D.

Gynecology. Langdon Parsons, M.D., and Sheldon C. Sommers, M.D. Price, $20.00. Pp. 1250, illustrated. Philadelphia: Saunders, 1962.

This is an excellent comprehensive reference book on gynecologic problems from infancy through old age. It differs from previous texts on gynecology in a number of ways. One of the chief differences is the organization of the material. The book is divided into 7 parts, each of which pertains roughly to a decade in a woman's life. This is done in an effort to relate gynecologic symptoms to disease processes and functional disorders as they are manifested in the different age groups. Omitted is the formal review of basic anatomy. In its place are chapters on congenital anomalies, sex determination, genetics, and sex chromatin patterns. A welcome and wise addition to a gynecologic text are the chapters on the breast, particularly the one on diagnosis and treatment of common lesions of the breast. Also unique is the inclusion of a chapter on marriage counseling and sexual problems. The usual gynecologic problems of infection, abnormal bleeding from the genital tract, and tumor formation are ably discussed as to etiology, diagnostic techniques, pathologic findings, and treatment. Particularly to be recommended is the chapter on pelvic pain.

The book is clearly written, well indexed, and contains a number of excellent pictures. Noticeably lacking, however, are colored plates.

"Gynecology" can certainly be recommended as a reference text to any doctor who treats women of any age. None, however, will find it "light" reading. The book weighs over 6 pounds.

Josephine E. Renshaw, M.D.

Ciba Foundation Symposium on the Exocrine Pancreas, Normal and Abnormal Functions. A. V. S. de Reuck, M.Sc., D.I.C., A.R.C.S., and Margaret P. Cameron, M.A., Editors for the Ciba Foundation. Price, $11.50. Pp. 390, with 91 illustrations. Boston: Little, 1962.

Many texts have been published in depth dealing with the endocrine aspects of pancreatic function. Prior to the publication of this symposium on exocrine pancreatic function, there had never been published in a single volume such an authoritative, complete and clear review of the myriad functions of this silent organ.

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(Continued on page 24)

NEW AND FORTHCOMING BOOKS

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THE DIAGNOSIS OF EARLY CARCINOMA OF THE CERVIX by **Dr. Stanley Way, F.R.C.O.G.,** *Queen Elizabeth Hospital.*

This new manual covers problems faced by both the gynecologist and the pathologist in the use of cytology for diagnosing malignant changes in the cervix uteri. It is a practical book, concerned specifically with employing the technique of exfoliative cytology.

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CLINICAL DISORDERS OF IRON METABOLISM by **Ernest Beutler, M.D.,** *Chairman, Department of Medicine, and Director, Hospital for Blood Diseases, City of Hope Medical Center;* **Virgil F. Fairbanks, M.D.,** *Associate Physician, Department of Medicine and Hospital for Blood Diseases, City of Hope Medical Center;* **and John L. Fahey, M.D.,** *Assistant Physician, Department of Medicine and Hospital for Blood Diseases, City of Hope Medical Center, Duarte, California.*

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ATLAS OF BONE TUMORS—INCLUDING TUMORLIKE LESIONS by **W. S. Gilmer, Jr., M.D., F.C.A.P.,** *Pathologist to Willis C. Campbell Clinic and Hospital, Memphis, Tenn.;* **G. B. Higley, Jr., M.D.,** *Memphis, Tenn.;* **W. E. Kilgore, M.D.,** *Memphis, Tenn.;* **and The Campbell Foundation and Division of Pathology and Microbiology,** *The University of Tennessee.*

This is an extraordinary atlas showing every conceivable bone tumor and tumorlike lesion of bone. Important diagnostic features and differential diagnosis are emphasized, and treatment and progress indicated. Recommendations on therapy and evaluation of prognosis are based on follow-up cases studied at Campbell Orthopedic Clinic and the University of Tennessee.

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Book Reviews

(*Continued from page 22*)

as the ultrastructure and histochemistry of the pancreas. There is a great deal of emphasis placed on the mature, physiologic control and assessment of pancreatic function. These sections, in themselves, make the entire volume worthwhile.

In addition, there are excellent presentations of material dealing with abnormal genetic and metabolic aspects of pancreatic disease. The final section of the book deals with a variety of subjects ranging from the neurogenic control of the pancreas, through sweat tests and pancreatic biopsy.

For those who have an interest in pancreatic disease, or for those who must develop such interest due to problems of a challenging case, this volume probably contains more current data on pancreatic function in health and disease than heretofore ever published.

JEROME H. EPSTEIN, M.D.

Endocrine and Metabolic Aspects of Gynecology. JOSEPH ROGERS, M.D. Price, $8.00. Pp. 189. Philadelphia: Saunders, 1963.

This is a textbook of the endocrine aspects of gynecology. It is compact, up to date, relatively comprehensive, and enriched with a voluminous bibliography and appropriate figures. The format is well designed, and access to material in the book is supplemented by both a good index and good subtitles. The terminology is well defined and the words and ideas are very comprehensible.

The subjects encompassed include the physiology of menstruation, chromosomal aberrations and gonadal defects, amenorrhea, functional and dysfunctional uterine bleeding, menstruation and systemic disease, dysmenorrhea, premenstrual tension, adolescence, the menopause, ovulation-induction and control, infertility, premarital examination, and marriage counseling.

This book should appeal to students and clinicians. The material is well organized, clearly exposed, and presents a fine work and basic study in this special field. There are acceptable clinical approaches suggested to practically all the usual problems in the field, and a few of the more subtle problems are adequately covered in the references.

JAMES D. BREW, JR., M.D.

Surgery. RICHARD WARREN, M.D., in Collaboration with 23 Members of The Department of Surgery of the Harvard Medical School. Price, $19.50. Pp. 1397, with illustrations by Janis Cirulis. Philadelphia: Saunders, 1963.

As stated by Dr. Warren, this is the first textbook produced by the Harvard Medical School Surgical Staff since Dr. John Homan's "Textbook of Surgery." The list of contributors is quite impressive although the book itself is only moderately so.

While the organization and material presented are

(*Continued on page 25*)

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Book Reviews

(*Continued from page 24*)

rather good, too much detail has been included in certain chapters, namely, those pertaining to the eye, ear, brain and spinal cord, areas from which the "general" surgeon has been excluded, whereas detail is lacking in other chapters concerning the gastrointestinal tract, hernias, and the endocrine glands, subjects in which the "general" surgeon today would more likely be interested.

The chapters dealing with the effects of trauma, parenteral and enteral therapy, and burns, written in collaboration with Dr. Francis Moore, are excellent.

Numerous well drawn illustrations are scattered throughout, but true photographs are entirely absent, detracting from the quality of the book. However, on the whole this latest effort of the Harvard group ranks fairly high in comparison with the other major surgical textbooks published recently.

Richard L. Cohen, M.D.

Ciba Foundation Colloquia on Endocrinology: Volume 14. Immunoassay of Hormones. G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Margaret P. Cameron, M.A., Editors for the Ciba Foundation. Price, $10.75. Pp. 419, with 85 illustrations. Boston: Little, 1962.

The book, which consists of an excellent group of papers by an international group of authors, active in the field of the immunoassay of hormones, covers the more recent developments in the general field of immunochemical methods for the characterization of hormones, followed by 3 to 4 paper groups concerned with the assay of growth hormone, insulin glucagon, thyrotropin, corticotropin, the gonadotropins, and prolactin. The volume closes with a fascinating group of 3 very short papers concerning the current status of the immunochemical assay of the intracellular localization of tropic hormones, in 1 of which Dr. Grumbach, of the Department of Pediatrics, Columbia University, College of Physicians and Surgeons, revealed a definite localization of fluorescent-tagged antibody in the eosinophiles of the adenoma of a patient with acromegaly, thus confirming an earlier paper which Drs. Grumbach and Kaplan demonstrated growth hormone in sections of human pituitary glands, localized in the eosinophiles by similar techniques. Using fluoroscene-tagged antibodies to ACTH, it was demonstrated that in normal human pituitaries fluorescence was seen in the cytoplasm of basophiles, the nuclei remaining dark without staining of eosinophiles or other elements of pituitary tissues.

All in all, I believe the book is an exciting contribution to this very rapidly progressing field and will make extremely interesting and informative reading for workers in this area and for those responsible for teaching in the general areas of pediatrics, endocrinology, metabolic diseases, and obstetrics and gynecology. I do not believe the book has a wide application for those engaged in the present therapy of patients.

John J. Canary, M.D.

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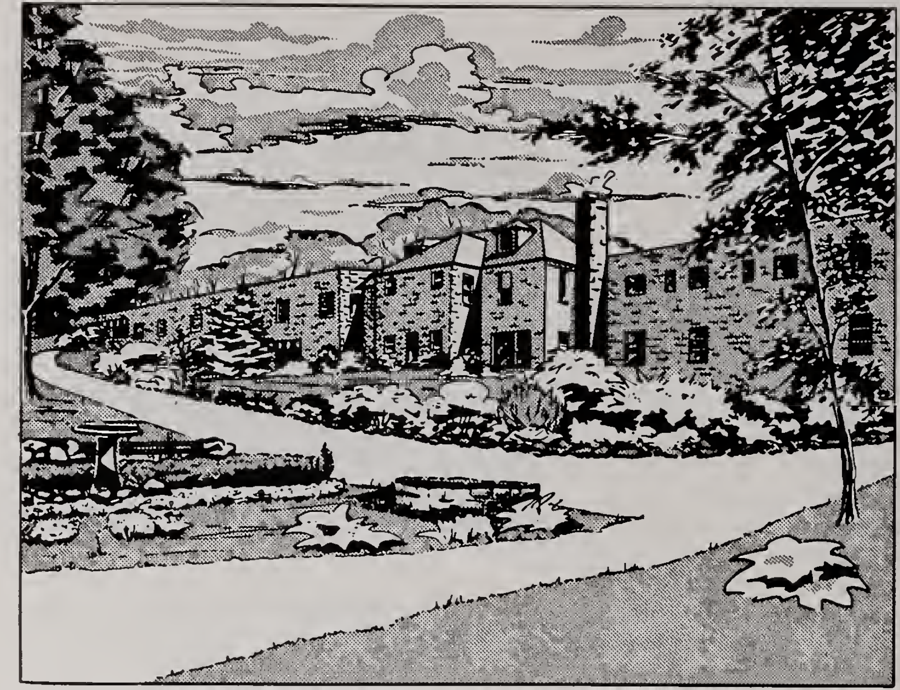

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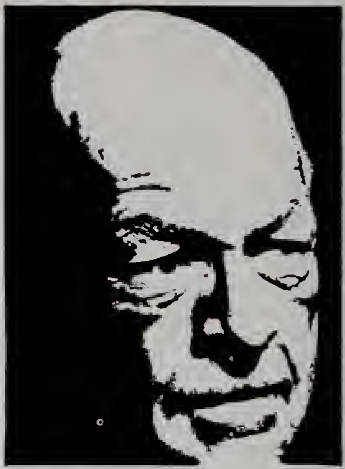

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Hydrocephalus

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Hydrocephalus is a condition characterized by abnormal accumulation of fluid in the cranial vault. This is one of the saddest of all conditions. Except for this abnormal accumulation of fluid the patient is entirely normal in every respect in most instances. The clinical problem is to eliminate the abnormal accumulation of fluid at an early age before any destruction of brain has occurred. The target of effort is clear and definitely defined. The accomplishment of eliminating this excessive fluid should be easy in our modern age, but hitherto this has proved a most difficult task.

The cerebrospinal fluid which occupies the intraventricular and subarachnoid spaces together with the communicating channels represents a lake within the body, the inlet of which is the arterial system and the outlet of which is the venous system. It is formed principally by the choroid plexus within the ventricles of the brain and is absorbed principally over the cortex of the cerebrum by means of arachnoid villi. There exist other minor sources and other minor areas of absorption of the cerebrospinal fluid which can be omitted in this general discussion of hydrocephalus.

Since both the origin and absorption of the cerebrospinal fluid occur intracranially, the resulting balance is independent of the position of the head as related to the body. The cerebrospinal fluid has the important functions to give support, buoyancy, constant temperature, and protection to the brain. During straining this fluid affords a protection against rupture of cerebral vessels. The brain is protected from damaging ballottement within the cranium. It can act as a buffer for the nervous system against complex physical insults and chemical changes. It has many important functions, but it can also be destructive to the brain if there is a discrepancy between its formation and its absorption.

This discrepancy is usually due to inadequate absorption which may be caused by some anatomic barrier to the circulation of the spinal fluid. If this should exist, the clinical term of obstructive hydrocephalus has been employed. The obstruction may be congenital, or it may be acquired.

In most patients there exists no obstruction to the flow of the cerebrospinal fluid, but there does exist an inadequate absorption into the venous system which occurs over the cerebral cortex. This condition has been clinically designated as communicating hydrocephalus. I wish to explain, however, that all cases of hydrocephalus are physiologically obstructive. At autopsy one will find the ventricles of a patient dying of communicating hydrocephalus just as dilated as of one who has died of obstructive hydrocephalus. This can be explained by the rather marvelous mechanical mechanism of the ventricular system and the cerebral aqueduct enclosed in the mesencephalon.

Dr. Grace Guinn,[1] the pathologist at Children's Hospital, measured the diameter, the length of the cerebral aqueduct, and the diameter of the mesencephalon during the postmortem examinations of a number of newborns. The average diameter of the cerebral aqueduct was 3 mm., and the average length was 12 mm. The average diameter of the mesencephalon was approximately 20 mm. The pressure of the cerebrospinal fluid is theoretically equal in all directions. Therefore, using this principle one can readily ascertain that there exists 9 times more pressure of producing collapse of the cerebral aqueduct than to force the fluid through the aqueduct.

I have used a method for continuous subarachnoid drainage under controlled pressure to study the circulation of the cerebrospinal fluid.[2] This study has confirmed the theoretical calculations.

Etiology of Hydrocephalus

Congenital hydrocephalus is due to the obstruction of the circulation of the cerebrospinal fluid at any part in its course. This fluid accumulates under pressure causing dilatation of the ventricles with atrophy of the brain and enlargement of the head.

Congenital malformations of the nervous system exist in only about one-fourth of all cases of congenital hydrocephalus. These are principally spina bifida, cranium bifidum, absence of the corpus callosum, bilateral porencephaly, fusion of the cerebral hemispheres, absence of the vermis of the cerebellum, and malformation of the cortical convolutions and of the cortical blood vessels. Associated conditions are frequently platybasia, Arnold-Chiari syndrome, chondrodystrophy, and osteoporosis.

About three-fourths of all patients suffering with hydrocephalus show no congenital defects. In this group of patients, if the circulation of the cerebrospinal fluid can be made normal they have an opportunity to develop normally. It is my opinion that the causes of communicating hydrocephalus among this group of patients are principally temporary. If the pressure of the cerebrospinal fluid can be kept normal for a period varying from a few days to a few weeks the absorptive mechanism will develop adequately to maintain a balance.

During the first few days of life the head of the infant becomes spheroid as the result of the hydrostatic pressure of the cerebrospinal fluid. If the absorption mechanism is inadequate due to the presence of blood in the subarachnoid space or to thrombosis of cortical veins or of the dural sinuses, the increased pressure will obstruct the cerebral aqueduct as described above. This in turn will produce dilatation of the ventricles, collapse of the cortical veins, and the beginning of the vicious cycle of decreased absorption of cerebrospinal fluid. If the baby's head is enlarging too fast in the early days of life the diagnostic procedures should be conducted immediately. To await the development of the clinical picture is as disastrous as to await the development of cachexia in suspected malignancy. Furthermore, there is nothing more tragic than to watch a baby die from some condition such as chronic subdural hematoma that lends itself readily to surgical therapy.

Diagnosis of Hydrocephalus

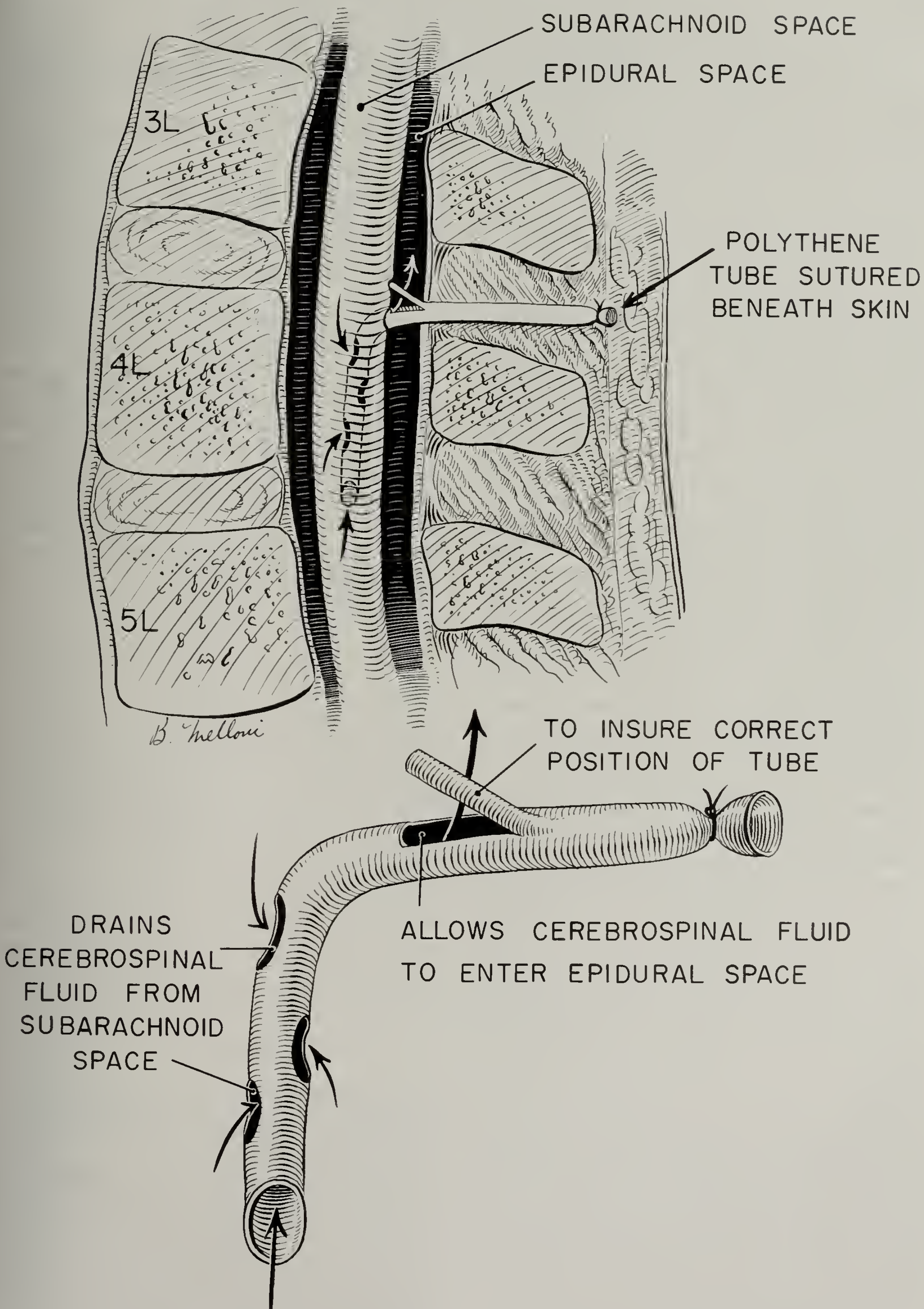
The circumference of the head of every newborn baby should be measured daily. The head will increase in size greater than normal only as a result of increased intracranial pressure from some cause. The enlargement of the head is not synonymous with hydrocephalus.

I have adopted a routine procedure in an effort to make an accurate diagnosis. This routine procedure is similar to that illustrated by Murtagh and Kirkpatrick.[3]

A bilateral subdural tap is made with number 20-gauge needles having dull points. One may obtain old blood, which would indicate a subdural hematoma. He may also obtain blood, which would represent tapping a cortical vein. Furthermore, one may be tapping the border of a tumor or a small area over a sulcus. Therefore, some wisdom has to be used to interpret the results of a subdural tap. Any positive finding must be pursued. If the subdural tap is negative one should carefully note the depth of the needle and extend it gently toward the ventricles. When the tip of the needle enters the ventricle, one can then estimate the thickness of the cortex. A small amount of indigo carmine is introduced through one needle and aspirated through the other to demonstrate patency of the interventricular foramina. About 10 to 30 c.c. of fluid is removed and replaced by a like amount of air. The patient is taken to the X-ray room where appropriate views are made, including the swinging head position. After the completion of these studies a spinal puncture is performed, at which time the dye is detected if there exists a communicating hydrocephalus. If there exists a so-called obstructive type of hydrocephalus the dye is not recovered, and also frequently the site of obstruction has been demonstrated by the X-ray studies. One can usually make a very definite diagnosis of hydrocephalus and can determine whether or not the hydrocephalus is of the obstructive or the communicating type.

Treatment

The treatment of hydrocephalus has been most baffling. If the diagnosis of communicating hydrocephalus has been made early one is justified to attempt to treat the condition by repeated spinal drainage. In this manner the pressure of the cerebrospinal fluid can be lowered to a normal level, thus giving the collapsed cerebral veins an opportunity to function or permitting the thrombosed veins and sinuses to have time to regain normal functions. The cerebrospinal fluid should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ALLOWS CEREBROSPINAL FLUID TO ENTER EPIDURAL SPACE
DRAINS CEREBROSPINAL FLUID FROM SUBARACHNOID SPACE

FIG. 1. Insertion of polyethylene valve.

not be allowed to escape through the spinal puncture needle faster than it can flow through the cerebral aqueduct; otherwise herniation may develop. The indications for repeated spinal punctures can be determined by the growth of the head and by palpating the fontanelle. This simple procedure will succeed in a few instances. If a greater effort is required I recommend insertion of a polyethylene valve as demonstrated by the diagram (figure 1). This can be done through a Tuohy spinal puncture needle. The insertion of this polyethylene valve can be done by the pediatrician or the neurologist. This valve permits the escape of cerebrospinal fluid into the epidural space. Its patency will last only about 3 weeks, after which it may be removed and afford drainage for an additional week. The polyethylene valve may be inserted at another level when needed. If the patient does not succeed in establishing adequate absorption within 6 to 8 weeks this type of therapy should be discontinued. The next procedure has been the use of the ventriculo-atrial shunt. This is a neurosurgical procedure, and the patient requires very careful supervision afterward. We have used this method of treatment on more than 30 patients, but we have had the usual failures. Very frequently the valve has required readjustment or has become plugged. Furthermore, the growth of the patient has introduced additional problems.

If the patient has the obstructive type of hydrocephalus the type of treatment will depend upon the location of the obstruction. In some instances the obstruction can be excised. If this is not possible one may use either the ventriculo-atrial shunt as mentioned above or the Torkildsen technique to drain the cerebrospinal fluid from the lateral ventricle into the fourth ventricle, circumventing the cerebral aqueduct. This procedure may change obstructive hydrocephalus to a communicating one. In most instances, however, the absorption may be adequate without further treatment.

I plan in the future to try the method of continuous subarachnoid drainage under controlled pressure for certain patients suffering with communicating hydrocephalus. This method can be continued for 2 to 3 weeks without danger of infection. When one uses this method the pressure should probably be maintained at about 80 mm. of water to stimulate the maximum development of the individual's absorptive mechanism.

Jackson[4] reported a neurengenic cyst associated with chronic meningitis and hydrocephalus. When the cyst was excised surgically the hydrocephalus disappeared. Kibler, Couch and Crompton[5] reported 5 cases of hydrocephalus developing after spontaneous subarachnoid hemorrhage and collected 8 other such cases from the literature. Murtagh and Baird[6] treated hydrocephalus successfully by removing an intraventricular hematoma. Reigh and Nelson[7] cured a case of hydrocephalus by operating on a subdural hematoma in the posterior fossa. Kinal[8] demonstrated that trauma to the venous sinuses can produce hydrocephalus. These reported cases and others demonstrate the need for an early accurate diagnosis because some demonstrable lesions can be treated successfully by surgical excision.

Sandifer[9] studied 182 cases of hydrocephalus untreated. Only 5 per cent of these patients had active hydrocephalus at school age. Fifty per cent were already dead. Of those who were alive approximately one-half had become arrested, and of the arrested cases about one-third appeared to have normal intelligence. It is evident, therefore, that this disease is too devastating to permit one to indulge in watchful waiting.

Conclusion

About 25 per cent of all patients suffering with hydrocephalus have congenital lesions which cannot be treated successfully at the present time. About 75 per cent of all patients suffering with hydrocephalus have no concomitant lesions. If the patients of this group are diagnosed early many can be treated successfully by the simple method of repeated spinal puncture or by the insertion of a polyethylene valve to drain the excessive cerebrospinal fluid into the epidural space. If these methods fail, one should probably use a ventriculo-atrial shunt. With patience and perseverance a large percentage of this group can be treated successfully for an indefinite time.

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(Continued on page 300)

Dilemma of a Psychiatrist in Court*

Application of the Criminal Law in the District of Columbia

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IT IS IN THE AREA of criminologic problems that there exists a great sense of community tension and interprofessional disharmony. This 26th Annual Meeting of the Medical Society of Saint Elizabeths Hospital honors the memory of Benjamin Karpman, who worked for many years with the criminal insane hospitalized here. He has stated, "The origin of crime, like the origin of society in general, is lost in the obscure antiquities of mankind's development. Crime is at least coeval with social history. Some sociologists, as Oppenheim, believe that the state itself is a product of crime, and that crime and lawlessness antedated the formation of society."[1] About the criminal, he says:

> "It takes courage to defy society and it must be fed by some emotion or set of emotions: hostility, inferiority, insecurity, rejection, guilt and others. There is hostility in all aggression, even constructive aggression. If we trace criminality to its earliest sources, we find universally that it was determined at a very early age. In the oedipal situation where the arising hostilities were never resolved by affection, these hostilities, thus freed, motivate a series of aggressive acts. With the hostility not neutralized, as the boy grows, crime feeds upon hate and later we have a full-fledged criminal."[1]

We owe much to those who work with children and delinquent adolescents to keep them from hardening into the adult criminals that Karpman studied.

Let us gain perspective on this problem by hearing Zilboorg[2] tell us what American psychiatrists were saying in 1847 as the McNaghten Rule on responsibility for a crime was being inflicted upon the American psychiatrist's appearance in court:

> "It is singular indeed for judges in this State to instruct juries, not in the words of our own statute, but according to what they may suppose to be the law of England, and to establish as a test of insanity, 'inability to distinguish right from wrong,' a test alike unknown to our statute, and to truth and justice.... But, say (the state judges), the statute does not define insanity, it does not say what it is, and we cannot trust to the common sense and intelligence of the jury to determine what it is, even if aided by the testimony of medical men, and those practically acquainted with this disease, but we must go back and ascertain what a certain set of men who lived centuries since in an ignorant age, and who knew nothing of insanity, thought to be its symptoms and nature, and whatever they thought and said on this subject, the jury must receive as law. Surely this passes even beyond absurdity." (p. 565)

Is it any wonder that W. W. Godding, then Superintendent of Saint Elizabeths Hospital, in speaking before the Psychological Section of the International Medical Congress in Washington in 1887 said: "I shall not live to see it, but he who writes the judicial history of the twentieth century will record the abolition, among English-speaking nations, of my Lord Coke's venerable dogma of a knowledge of right and wrong as a test of criminal responsibility in the insane." (p. 566)

It is in the fine tradition of Saint Elizabeths Hospital that its Superintendents have spoken with a firm voice in this field. Here is what William A. White had to say in 1923 in his "Insanity and the Criminal Law," according to Zilboorg[2]:

> "White unmasked the psychological motivations of criminal justice. He demonstrated the aggressive, revengeful motives of the criminal law; he pleaded for psychological determinism, for the careful and profound individualization of each case of crime; he decried the 'separation of the act from the actor.' White cited criminal cases which he himself had studied in great psychological detail and with profound, humane understanding. He wanted to abolish the hypothetical question and suggested that every future criminal lawyer serve an internship in prison, in the same manner that a doctor serves in a hospital." (p. 574)

And in 1927 before the American Bar Association White said, "The psychiatrist in his contact with the legal machinery finds that the methods of procedure are such as to make it well nigh impossible for him to mobilize his knowledge in any useful way for the assistance of the courts in dealing with the individual problems before him." (p. 574) Also, he said, "The question of responsibility carries with it a metaphysical implication, and the more one thinks of it the more one feels quite incapable of answering it." He noted that "The remedies upon which the law seems to repose are hangovers, as it were, of a theological age." (p. 575)

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* Presented at the 26th Annual Meeting of the Medical Society of Saint Elizabeths Hospital in Washington, D. C., April 19, 1963. This is an abridged version of the original paper.

† Physician appointee, 1960–.

It was to be in 1954 when some judges right here in Washington tried to gratify Godding's 1887 wish to put an end to the McNaghten Rule. One of the judges was quoted, in instituting the Durham decision, as stating that "The science of psychiatry now recognizes that a man is an integrated personality and that reason, which is only one element in that personality, is not the sole determinant of his conduct. The right-wrong test, which considers knowledge or reason alone, is therefore an inadequate guide to mental responsibility for criminal behavior. . . . We find that the 'irresistible impulse' test is also inadequate. . . . We conclude that a broader test should be adopted."[3] The new test of responsibility to be applied in all future criminal cases in the District of Columbia now became: "An accused is not criminally responsible if his unlawful act was the product of mental disease or defect." Abe Krash[4] in his very careful and detailed law review article, "The Durham Rule and Judicial Administration of the Insanity Defense in the District of Columbia," states hopefully: "This new standard was designed to reconcile the rule of responsibility with advances in medical knowledge, and to broaden the class of persons who would be treated instead of punished; more particularly, it was framed to facilitate communication between psychiatric experts and the courts which was being impeded by the preëxisting tests." (p. 905)

What has been the actual experience of the psychiatrist in court here in the District of Columbia testifying in criminal cases under the Durham Rule? First, we must realize in asking this question that every psychiatrist has memories of his medical training days—the white coat, the stethoscope, and the bedside manner. He has been encouraged to develop a humanitarian "good guy" self-image. He is accustomed to honest differences of opinion with colleagues in the "good" battle against disease and distress of human existence. Yet he is almost always stunned by his first encounter in court with the adversary procedures of the trial lawyers. To be caught up in an unwanted hypothetical question, or to have one's opinions treated with barely veiled sarcasm, can seem much worse than the many demands of a difficult patient. But then, there is always the judge to turn to with the hope and expectation that he will be benevolently understanding. With this image in mind let me read to you from a 1961 newspaper article[5]: "A familiar verbal curtain fell between a judge and a psychiatrist yesterday during the District Court trial of a Washington man charged with murder." The article goes on to say that the psychiatrist testified that the defendant was suffering from a disorder known as "inadequate personality," but that he found no indication that the disorder might have produced the alleged crime. The judge asked the psychiatrist if the disorder was a "mental illness." The psychiatrist said it was. "Is every personality disorder a mental disease?" the judge asked. "Well, it is hard to say in black and white. . . ." the psychiatrist began. "But, Doctor, I have to decide on black and white," the Judge broke in. "I can't decide the future of a human being on gray." Pressing on, he asked the psychiatrist if the defendant's mental illness could be classed as insanity. "Insanity is not a medical term," the psychiatrist replied. "My term would be mental illness." "You have to use my terms," the Judge replied. "The criminal code uses 'insanity'; so does the ordinary layman. Doctor, one reason for expert testimony is to translate technical terms into layman language." "If 'mental illness' means 'insanity' to the layman, then the term could be 'insanity,' " the psychiatrist said grudgingly. That was certainly not a happy day for that psychiatrist.

Another kind of Durham Rule experience was the attempt to impart more understanding while in the courtroom by Addison Duval, at the time Assistant Superintendent of St. Elizabeths Hospital. A 1958 newspaper article[6] states that he "used the witness stand in District Court as a lecture platform yesterday as he tried to tell the judges and lawyers why he thinks psychiatrists are asked to testify improperly in criminal cases. During the course of 3 hours of testimony, Dr. Duval charged, 'the courts are not getting the best psychiatric testimony under the present methods of approach.' Lawyers, he insisted, ask the wrong questions and try to get psychiatrists to testify about matters in which they have no special competence. Whether a man is insane or of unsound mind, Duval told Judge Schweinhaut, is an issue for the court to decide. When the courts insist that a psychiatrist answer questions about insanity and unsoundness of mind, he said, 'I rather feel we are being asked to do something which we are not competent to do.' He explained, 'There is no such thing as unsoundness of mind or insanity in medical terms.' Doctors, he added, can testify only about whether a man has a mental illness, what that illness means in terms of behavior, what its symptoms are, and what it is likely to mean in his future behavior. Since mental illnesses vary greatly in severity, he explained, the psychiatrist is unable to draw a line which would mark off all those who are sane or insane. In our society, he said, this line is to be drawn by the courts in each individual case."

In this same trial 4 psychiatrists testified concerning the defendant, a sociopath. Two psychiatrists testified that he was of sound mind and 2 that he was of unsound mind. Three of the 4 psychiatrists were staff members of St. Elizabeths Hospital. This all too frequent spectacle of a parade of psychiatrists taking the witness stand with no common agreement in their replies to the questions put to them has done considerable harm to the public image of psychiatry as a valid scientific discipline. On closer scrutiny of what takes place it can be observed that the problem is not that there is that much difference in clinical acumen and diagnosis, but that there is a demolishing of the psychiatrist's integrated clinical approach by the legal maneuvers of creating a dismembered array of fragments of acts upon which the psychiatrist is asked to testify. The illusory implication is that impartiality is achieved by fragmenting the defendant into parts. Impartial means "not partial" rather than "in parts." As in the Biblical story of the decision confronting Solomon as to which woman was the real mother of the baby, the psychiatrist is left with the feeling that the trial lawyer cares only to win the argument, not to nurture justice.

There have been attempts to make the Durham Rule more workable since its inception in 1954. In a letter to a local newspaper,[7] in December, 1962, Richard Board examined one of these changes as follows:

> "The United States Court of Appeals for D.C. has recently attempted to rectify the Durham criteria for determining criminal responsibility. In the McDonald decision the Court said: 'What psychiatrists may consider a mental disease or defect for clinical purposes, where their concern is treatment, may or may not be the same as mental disease or defect for the jury's purpose of determining criminal responsibility.' Since juries are to coin this fiction of legal or judicial mental illness, the McDonald decision is being espoused as returning final conclusions from testifying psychiatrists to juries. But the basic reason for bestowing upon juries the dubious privilege of coining legal fictions is to save the Durham criteria. What causes all the trouble for the Durham criteria is the fact that the majority of criminal acts are the product of mental illness. A psychiatric consultant to the Legal Psychiatric Services of the Department of Public Welfare for D.C. estimates that mental illness was a motivating cause of the criminal acts of at least 75 per cent of the prison population of the D.C. Jail and Lorton Reformatory. Lest this seem unusual, a similar 75 per cent estimate holds for Joliet State Prison in Illinois. Hence, if the Durham criteria were vigorously applied, most criminal cases would have to be declared not criminally responsible and 75 per cent of the prison population would have to be released on the same ground that their criminal act was the product of mental illness. Since this would have a devastating effect on the community, judges, juries, lawyers, and psychiatrists have unwittingly engaged in the fantastic pretense that less than 2 per cent of criminal cases involve the criminal act being the product of mental illness. The figure cited is less than 2 per cent because that is the incidence of court determinations of criminal irresponsibility. Since the difference between 75 per cent and 2 per cent is quite a difference some very fancy footwork has been necessary to apply the Durham criteria. Accurate psychiatric testimony under the Durham criteria confronts the courts with the spectre of declaring most criminal cases irresponsible."

In his unveiling of justice, Board presents a picture of a seemingly intelligent, well-intentioned step having led to a quagmire of foolishness.

What do we do now? Is there a new or better course to follow? I believe that there is. I consider my own position to be in line with what Bernard Glueck said in 1934:

> "The only hopeful approach to the problem of criminal conduct lies in the application of a scientific individualized approach which has rehabilitation and reconstruction as its end in place of the traditional impersonal and more or less mechanical procedure that characterizes the legal approach to these problems. . . . It would not seem altogether visionary to think of the future court of criminal law as approaching more closely the characteristics of a clinic in human maladjustment. I believe that one can look forward to a day when these courts will indeed become social clinics for the amelioration and possibly the solution of the problems of adjustment to civilized communal living. . . . I am entirely convinced, after studying many hundreds of criminal careers, that the chances of reformation of a given criminal are in reverse ratio to the amount of contact he has had with the law. It is for this, if for no other reason, that the psychiatrist is concerned with the functioning of the law, as indeed he is with every other institution governing man's conduct as a member of society."[2]

As early as 1922, as quoted by both Weihofen and Zilboorg,[2] an associate justice of the Supreme Court of California urged ". . . that insanity be no longer treated as a defense to a criminal charge, and that evidence on that subject be excluded from the jury trying a criminal case; that after conviction the defendant, upon suggestion of insanity, be examined by a board of alienists with a view to determining whether the defendant should be committed to the state hospital, or prison, or be released under probationary supervision to private hospital or to other custody; that the judge be empowered to make such supervisory orders from time to time upon the advice of competent alienists as may be necessary, and that the state retain jurisdiction over the defendant even after an apparently complete cure for at least as long as the maximum term of imprisonment for the offense, resuming custody of the defendant during that period whenever symptoms of a relapse make further custody desirable for the protection of the public."

In this proposal of over 40 years ago we already find blended the fundamental psychiatric curative idea with the idea of social security, which is or ought to be the major goal of the law. A recent study by 3 *Georgetown Law Journal* staff members[8] states that at the present time in California it is the law that a suspect is tried first solely on the question of guilt, and then if found guilty is tried on insanity. If he is found insane, the guilty verdict is set aside and he is hospitalized. To me this is much better than the Durham Rule.

Returning from California to the District of Columbia where our newspapers carry such disconcerting Durham Rule captions as "Patient Held for 14 Thefts Claims 'License to Steal,' "[8] and where a man has been found guilty of robbery but yet not guilty by reason of insanity in raping his robbery victims—thus giving our large foreign diplomat contingent in this city the impression that we Americans place money before honor—I am sure you share my concern and the concern of many local citizens as to what we have come to in the name of justice. Franz Alexander,[9] in his noted book, "The Criminal, the Judge, and the Public," states:

> "The practical concept of responsibility can thus be replaced by the scientific concept of the degree and mode of participation of the Ego in a given act. Only the definite knowledge of the degree of this Ego participation should be considered the decisive factor in the choice of our methods of dealing with the given criminal. If one would insist on the use of the term 'responsibility,' we may say that an individual can be held responsible for his action only in so far as his conscious Ego took part in it."

I find it very hard to believe that there was much to differentiate in the ego structure of the man when he robbed and when he raped. The jury in such a case, having to learn psychiatry overnight, failed to see them as similar acts of sadistic devouring of hunted objects—the prized woman and her prized purse. This fragmentation of justice is what happens when impartial justice becomes in parts justice.

We are in need of a unifying approach. Such an approach is recommended by Winfred Overholser, our Superintendent of Saint Elizabeths Hospital for a quarter-century, and to whom this Annual Meeting is dedicated. In his very recent paper, "Psychiatry and Some Problems of Criminal Responsibility,"[10] he reviews the field and ends his paper with the following:

> "There is every reason to believe that there will be a greater recognition in the courts of the contributions which psychiatry may make for a more enlightened dealing with the offender and thereby a greater degree of protection of society. Perhaps, indeed, we may look forward to the establishment of 'treatment tribunals,' as proposed by Wharton and later by Sheldon Glueck, leaving to the jury the question only of guilt of the act and making the matter of disposition a wholly administrative matter. Then, and probably only then, will it be possible to avoid such concepts as 'insanity' and 'responsibility.' "

I should like to add that a "treatment tribunal" would also bring a cohesive force to counteract the fragmenting legal preoccupations I have mentioned. Let us not forget that a doer of criminal acts is typically full of compartmentalized thoughts, and in his actions, figuratively, does not let his left hand know what his right is doing. The "antidote" to this "poison," as William A. White put it, in my earlier quotation,[2] is not a "separation of the act from the actor." Criminal behavior can originate in a broken home and really flourish in a society lacking a feeling of togetherness. Criminal activity flourishes under the same social disorganization and distrust situations that political dictatorships do, where the trusting goals of a democratic society fall prey to antisocial hostilities.

In offering the benefits of our democratic society to the citizen suspected and accused of criminal behavior let us proceed with the image of a trial from which the question of insanity is excluded and the question before it is solely a search for the facts; namely, is it true that Citizen A did thus and so to Citizen B which was injurious, perhaps even fatal, and definitely contrary to the law? In the current style the jury may find Citizen A "Guilty as Charged." Now this is where I am going to raise an issue with the hope of liquidating the bulk of the "Competence to Stand Trial" and proof of intent concerns. I question the findings of "guilty" or "not guilty." These terms are archaic, undemocratic, vestiges of theocratic rule. It is a wonder to me that the finding of "guilty" has not been appealed to the Supreme Court as a violation of a citizen's right to freedom of religion. Guilt is a subjective inner experience. A person may suffer from guilt feelings unrealistically. Another person may not feel guilt when much of society would expect him to. The various religions present in America vary as to the stress and significance they ascribe to feelings of guilt. Guilt is subjective, the province of religion and psychology, subjectively experienced, not to be pronounced upon the citizen of a democracy as though it were Caesar's province.

The simplicity of the objective finding would be to the benefit of the due process of law. The jury need only find that Citizen A is or is not the doer of the injurious act to Citizen B. Why do I make this point? Because this now relieves us of the haunting ghost called "Not guilty by reason of insanity." Not making a declaration of responsibility and guilt, we are relieved of feeling the need to rush in with the humanitarian concern that Citizen A may not have had the mentality to know that he was doing wrong. He has qualified to be present in the courtroom simply by having the ability, however partial, to have been present where he was and do what he did that brought him to the attention of the law enforcement officers. And let us not hold up this legal processing because of some idealistic concerns as to how presentable he must be, and how much he fits in with the decorum of the courtroom and the obsessive-compulsive trends of some of the court personages. Isaac Ray noticed this obsession with reason and propriety in the courtroom back in the last century[2] (p. 567). Should we hold the legal process up because Citizen A has mannerisms, mood swings, or a sloppy attire? If we are not careful to draw the line only for patently severe psychoses, we could end up a pawn in the hands of the stalling criminal, like the mother of a brat, so afraid of what the eavesdropping neighbors might think, gratifies her child's every wish for fear a scene will be precipitated.

As a psychiatrist I have wondered at some of the long delays in starting a trial, as though the courts and lawyers were sharing a delusion that time doesn't pass, witnesses don't move about and die, memories don't fade as fresh events crowd them back. The sociologic function of the courts to reassure society that justice is being done seems forgotten when one reads in the papers legalistic jugglings of pseudopsychiatric terms instead of a reassuring unified attempt to understand and treat criminal behavior. Let us not be so concerned with the possible mental illness of the accused that we lose consciousness as to the effect of delayed or repeated trials upon the mental health of a victim's widow who is trying to recover from the traumatic loss of her husband. Also, let us not forget the victim's children who are old enough to read the papers or watch TV newscasts. Their mental health is in need of reliable adults to trust to fill the void left by the loss.

At times a lawyer gets quoted or written up in the newspapers in such a way as to convey the image that he's going to get the assailant "fixed up" with one of those "insanity defenses." This is making a mockery of justice in the name of the Durham Rule, using the psychiatrist as the "fall guy." Let us not forget that the recognition of mental illness in a criminal should lead to an attempt at treatment. Securing for a criminal the opportunity to get treatment is not to be confused with overprotective leniency. It can be much harder to be a patient ambivalently struggling to understand and overcome emotional conflicts in a treatment center than it would be to merely "goof off" as a hostile brooding loner in the "cooler."

Having held the initial judicial hearing which functions for the preservation of the mental health of the community, the need for security and trust in our common existence together, wherein we do not separate the act from the actor, but we do separate the assailant from his victims, and having established, by means of exhibits, and witnesses with fresh memories, that the accused was actually there and really did the act ascribed to him, regardless of mentality and motives, we can now proceed to the next function. In this second hearing, the "treatment tribunal," we examine what ails this man, what went wrong in his individual development and his relationship to the social order that he is now in need of being set apart, of being given a moratorium on his involvement with his fellow man, to the end that he can discover the real meaning of his existence and how he can participate once again with sufficient reliability in society so as to be permitted to be free and on his own upon discharge from his sentence.

It is in the assessing and sentencing of the individual law-breaker that the psychiatrist can appear and can testify as a psychiatrist to the benefit of all concerned. Instead of the repressive rigidities of black or white, yes or no testimony, he can, in a flexible setting, be realistic about the rainbow spectrum of gradations of ego strength in individuals who are equal as citizens but unequal as to character structures. The door can be opened to others as well, such as character witnesses, former teachers and counsellors, ministers, priests, rabbis, probation officers, etc. The judicial determination can be made as to the person's total character structure, specific evidences of mental illness and diminished ego capacity for handling well-intentioned and evil-intentioned actions, and probable response to treatment and/or confinement. Flexibility in the administration of the law will be possible and wholesale dumping of convicted persons into unprepared mental hospitals can be avoided. And just as the door is open to other disciplines in assessing and sentencing so can the period of confinement and/or treatment be one of multiple efforts by all who can bring about constructive change in the individual in question. It is here, for example, that a chaplain, with the added training that ordinary ministers do not have, may really get to this man's religious beliefs and his subjective awareness of guilt or responsibility. The resistances to constructive change are many; there is plenty of room for all the forms of psychotherapy that can be brought to bear to involve and to budge this man from hardening of his hatred for himself and his fellow man.

In sum, let's have out with Durham as well as McNaghten; and let's have out with theocratic hangovers of guilt and responsibility. Let us not separate the act from the actor, thereby dwelling in unreal fragments at the expense of our total wisdom. Let us not deny the assailant the reality of his existence, however much unenviable it may be. Let us separate the assailant from his victims that we not put additional burdens on the mental health of his victims, their families, the witnesses, and the community. Let us recapture the simplicity of justice as a process. And with the coordination of society's due process of law with the process of scientific psychiatric evaluation and treatment of the individual offender, we can have hopes of a unified approach with benefit to all.

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Some Current Concepts in Infectious Diseases*

Part III. Fever: Pathogenesis and Clinical Axioms

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Pathogenesis

EXPERIMENTAL DATA appear to support the concept of tissue injury in the production of fever, at least under some circumstances, wherein a product or products liberated from injured tissues act on the thermoregulatory centers in the region of the hypothalamus and brain stem and disturb their function.[1] Consequently, neural mechanisms are initiated which are responsible for the vasomotor and muscular phenomena that result in both increased heat production and decreased heat loss. Such a concept is given in explanation of the febrile response associated with infection, inflammation, neoplasm, hemolytic crises, vascular accidents (both hemorrhage and infarction), mechanical injuries, and so forth. In certain instances of so-called neurogenic fever resulting from direct injury to the central nervous system (cerebrovascular accident, tumor, meningo-encephalitis) genesis of the febrile response may be less circuitous.

Production and regulation of body heat. The principal source of body heat is the combustion of food. The greatest amount of body heat is generated in the liver and in the voluntary muscles. Heat production in the voluntary muscles is particularly important in the regulation of the body temperature because the quantity of heat can be varied with need. Usually minimal increase or decrease in the number of neural impulses to the voluntary muscles with consequent inapparent tensing or relaxing of the muscles is sufficient to maintain optimal body temperature. However, when occasion demands a strong stimulus for heat production may so increase activity of the muscles that shivering occurs.

Body heat is lost in the warming of food and drink, in the evaporation of moisture from the respiratory tract, and, principally, in radiation, convection and evaporation on the body surface. When the external temperature equals or exceeds that of the body, the subject's only mechanism of heat loss is evaporation of water. The principal method of regulating heat loss is by varying the volume of blood flowing to the surface of the body. A rich circulation in the skin and subcutaneous tissues carries heat from the deeper portions of the body to the surface, where it escapes. Sweating, via cholinergic autonomic stimuli, increases heat loss by providing water to be vaporized. Conversely, to conserve body heat, adrenergic autonomic stimuli reduce blood flow to the surface and transform the skin and subcutaneous tissue into layers of insulation.

Thermoregulatory centers. The thermoregulatory centers in the brain can be affected by several kinds of stimuli in addition to direct injury. Lesions damaging the anterior portion of the hypothalamus cause increase of body temperature, while lesions damaging the posterior portion may cause marked hypothermia. Variations in the temperature of blood flowing through the brain may increase loss or production of body heat. That sensory impulses have such a potential may be exemplified by the flushing and sweating that may follow certain gastric stimuli. Endocrine factors may be evident in the hypothermia of myxedema coma, and in the high temperatures in patients having "thyroid storm." The higher body temperature in women at the time of ovulation, the postovulatory phase of the menstrual cycle, the final month of pregnancy, and labor may represent, at least in part, endocrine effects. Abnormal metabolism involving the steroid, etiocholanolone, may elevate the body temperature. Gout, the rheumatic manifestation of abnormal pyruvate metabolism, may be associated with fever. Porphyria, another metabolic defect, may rarely cause fever but usually the fever reflects another condition associated with the porphyria.

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However, currently, among these multiple stimuli appearing to affect the thermoregulatory centers major interest hinges on microbial (exogenous) and leukocytic (endogenous) pyrogens and their possible interaction in the genesis of certain febrile responses.

Microbial and leukocytic pyrogens. When endotoxin derived from gram-negative enterobacilli is injected intravenously into rabbits, there is leukopenia followed by leukocytosis, and after a latent period of approximately 30 minutes there occurs a relatively prolonged fever, sometimes of the "double hump" variety.[2] The bacterial pyrogens are relatively heat-stable, and their fever-producing effect is uninfluenced by combination with specific antibody. When endotoxin is injected daily it usually produces after 4 or 5 injections a tolerance in which both the febrile and the leukocytic reaction are minimized. However, tolerance is of short duration and is nonspecific, since a subject made tolerant to 1 species of endotoxin is equally unresponsive to other endotoxins. Tolerance can be produced in subjects with hypogammaglobulinemia. Tolerance appears to reflect an enhanced ability to clear endotoxin from the bloodstream by the reticuloendothelial system and can be eliminated by blocking the latter with thorium dioxide.

Intravenous injection of viruses, such as those of the influenzal group, into rabbits produces a febrile response which differs from that following administration of endotoxin.[3] The latent period is 2 or 3 times longer, granulocytopenia is less prominent, and tolerance occurs more rapidly but is independent of enhanced reticuloendothelial clearance. In contradistinction to endotoxin, viral pyrogens are relatively heat-labile and are destroyed on in vitro combination with antibody.

Intravenous injection of tuberculin into previously sensitized rabbits is followed by transient granulocytopenia, and after a latent period similar to that noted after an injection of virus there occurs a biphasic febrile response which is maximal in 4 to 5 hours. Tolerance, similar to that developing in endotoxin fever, follows repeated injections of tuberculin, the mechanism of which may be related to desensitization.

Saline extracts of polymorphonuclear leukocytes produce a pyrogenic substance[1] having characteristics quite different from the above-mentioned microbial pyrogens. Compared with bacterial endotoxin it has an even shorter latent period, causes a briefer febrile response, is relatively heat-labile, induces no tolerance, and is fully active in subjects tolerant to endotoxin. Conversely, recipients not rendered tolerant to endotoxin remain responsive to it despite repeated injections of leukocytic extracts previously. Leukocytic pyrogen is a phenol-extractable protein, the pyrogenic activity of which is destroyed by proteolysis with either trypsin or pepsin.

Serum pyrogens. By positive transfer methods 2 distinct pyrogens can be isolated from the serum of rabbits injected intravenously with the above-mentioned microbial pyrogens. The first is cleared rapidly from the bloodstream following the injection and is indistinguishable from the microbial (exogenous) pyrogen injected. The second, appearing later, has all of the characteristics of leukocytic (endogenous) pyrogen. The electrophoretic pattern of serum containing this second pyrogen is indistinguishable from that of normal serum.[3] Also, there is no consistent change in serum properdin titers obtained when maximal amounts of endogenous pyrogen are present.[3] Endogenous pyrogen resulting from injection of a microbial pyrogen produces fever in a recipient rendered tolerant to reinjection of that microbial pyrogen. The formation of the second or endogenous pyrogen is depressed in animals rendered leukopenic with nitrogen mustard. Also, when rabbit or human leukocytes and endotoxin are incubated in saline solution the endotoxin shortly is no longer demonstrable, and simultaneously the leukocytes release their characteristic pyrogen into the surrounding medium.[4] Tracer techniques have verified the strong affinity that endotoxins have for polymorphonuclear leukocytes.

Endogenous pyrogen in experimental infections. In rabbits in which pneumococcal peritonitis has been induced a pyrogen of the leukocytic type is demonstrable in the peritoneal exudate, in thoracic duct lymph, and by passive-transfer technique in the bloodstream. With defervescence following penicillin therapy the pyrogen is no longer detectable. In this instance it appears that fever reflects the circulating endogenous pyrogen derived from the leukocytic exudate in the peritoneal cavity and carried to the blood via lymphatic channels emptying into the thoracic duct. Also, in rabbits in which cellulitis due to *Streptococcus pyogenes* has been produced circulating pyrogen is detectable by the passive-transfer technique.[5]

Central effect of endogenous pyrogen. That endogenous pyrogen of the leukocytic type acts directly on the thermoregulatory neurons of the hypothalamus and therefore may play a central role in the genesis of certain fevers is supported by the observation that endogenous pyrogen injected via the carotid artery causes a more prompt and more pronounced febrile response than when administered intravenously. A substance injected directly into the carotid circulation reaches the brain in greater concentration during the period of injection than when given intravenously. A substance not acting on the brain would give a slower response which would not vary despite the route of injection.

Pyrexin and pyrogenic tissue polysaccharides. Pyrexin,[6] a pyrogenic material isolated from sterile exudates and serum, can be distinguished from endogenous pyrogen of the leukocytic type. Recipients tolerant to endotoxin, which react like normal recipients to endogenous pyrogen, show a greatly decreased response to pyrexin as compared with controls. This fact, as well as the heat stability of pyrexin, suggests that it more closely resembles endotoxin.[3]

Pyrogenic tissue polysaccharides[7] also are heat-stable and behave, not like endogenous pyrogen, but like endotoxin. As is true following an injection of endotoxin, granulocytopenia occurs on administration of tissue polysaccharides.[3]

Concept that endogenous pyrogen is of leukocytic origin and its objections. Thus has the concept evolved that fever caused by microbial pyrogens reflects injury to the leukocytes and release into the plasma of endogenous (leukocytic) pyrogens which act upon the thermoregulatory centers of the brain. Some of the microbial pyrogens may, by causing the leukocytes to stick to the vascular endothelium, also induce postinjection granulocytopenia.

Without doubt, isolation of a pyrogenic factor from acute inflammatory exudates in leukopenic rabbits previously treated with nitrogen mustard[3,8] appears to challenge the validity of the concept. In the same regard the concept is manipulated with difficulty to encompass the clinical fact that high fevers occur in granulocytopenic subjects. Possible explanations for such dichotomies include the production of endogenous pyrogen by cells other than polymorphonuclear leukocytes, such as lymphocytes or macrophages, or perhaps enough polymorphonuclear leukocytes remain to account for the fever despite the total numerical reduction of granulocytes.

Summary of current concept of exogenous and endogenous pyrogens in the pathogenesis of certain fevers. Currently it appears that, in some cases, at least, fever is an effect of a product or products of tissue injury. There is something in inflammatory exudates which on injection into normal subjects can result in fever; one source of such a pyrogen is polymorphonuclear leukocytes. The thermoregulatory centers in the brain appear to be affected by multiple kinds of stimuli including variations in the temperature of the blood flow through the brain, sensory impulses, and endocrine factors, as well as the direct effect of a microbial pyrogen and the indirect effect of endogenous pyrogen.

Clinical Axioms

1. There is a normal variation in body temperature 0.5 to 2.0°F during a 24-hour period; the highest temperature usually occurs in the early afternoon, while the lowest usually occurs during sleep in the early morning.

2. In hot weather the body temperature may be elevated 1°F, and of course in victims of heat stroke it may be considerably higher; digestion, exercise, and dehydration, especially in children, may also elevate body temperature.

3. Persistent low-grade fever in patients past middle age is almost always significant. Young women usually displaying neurotic characteristics and having an oral temperature of 99.0 to 100.5°F regularly or intermittently for years as a rule ultimately prove to have so-called habitual hyperthermia.

4. The possibility of factitious fever is suggested by absence of tachycardia, lack of sweating after defervescence, and failure of the temperature curve to observe the expected diurnal variation.

5. Almost half of all fevers of obscure origin (body temperature above 101°F for longer than 3 weeks) ultimately prove to be due to infections.

6. Tuberculosis is to be suspected in cases of fever of obscure origin, especially in Negroes, diabetics, and patients receiving corticosteroids.

7. A history that a patient had a furuncle several weeks before the onset of a febrile illness suggests the possibility of perinephritic or renal cortical abscess.[9,10]

8. Charcot's intermittent hepatic fever may occur unassociated with jaundice or colic, so that, to rule out this possibility, investigation of the biliary tract is indicated in fever of obscure origin. A history of previous cholecystectomy in a patient with intermittent fever especially warrants exclusion of Charcot's fever.[11]

9. Fever following urinary instrumentation or a urologic surgical procedure suggests urinary-tract infection, bacteremia, and vertebral osteomyelitis or disk-space infection due to gram-negative enteric bacilli. In disk-space infection fever may precede symptoms, and roentgenographic changes may lag behind clinical signs by several weeks.

10. Persistent fever following dental extraction and not due to local causes suggests bacterial endocarditis. However, at least 3 mycotic diseases appear to have followed dental extractions: actinomycosis,[12] nocardiosis,[13] and cryptococcosis.[14]

11. In patients having fever of obscure origin splenomegaly suggests infection (endocarditis, brucellosis, typhoid), lymphoma, and acute leukemia; if hepatosplenomegaly is present one also considers cirrhosis; if hepatomegaly without splenomegaly is present one considers cholangitis, metastatic malignancy, and liver abscess.

12. In patients having fever, a nonvenereal local lesion, and regional lymphadenopathy, one's considerations should include cat-scratch fever, rickettsial pox, tuberculosis, anthrax, and tularemia.

13. In the diagnosis of bacteremic shock in patients having conditions characterized by "primary" fever (cirrhosis, acute leukemia, lymphoma) or fever due to local infection (malignant disease, prostatism, cholangitis), a sphygmomanometer may be more helpful than a thermometer.[15-22]

14. Fever may reflect trauma, as in crushing injuries of the limbs or trunk, extensive operations, and direct injury to the brain (neurogenic fever).

15. Extensive skin disease may disallow heat loss from the body surface, resulting in fever. Congenital absence of sweat glands, ichthyosis, and eczematoid dermatitis are among such causes. In eczematoid dermatitis one should always exclude staphylococcal superinfection, including bacteremia.[23]

16. Hematopoietic causes of fever include acute leukemia, aplasia of the marrow, agranulocytosis, pernicious anemia, and hemolytic crises. In cases characterized by hemolytic crises one should consider also cholangitis associated with cholelithiasis.

17. Possible causes of elevated temperature (usually 0.5 to 1.5°F) in patients having congestive heart failure include impaired heat dissipation because of diminished cardiac output, decreased cutaneous blood flow, the insulating effect of edema, and increased heat production secondary to the increased muscular activity associated with dyspnea. However, one should exclude phenomena concerned with the type of heart disease present (myocardial infarction, bacterial endocarditis, rheumatic fever), thrombo-embolic disease, and urinary-tract infection.

18. Elevations in temperature are associated with various metabolic states including that of ovulation, the postovulatory phase of the menstrual cycle, the final month of pregnancy, and labor; gout; thyrotoxicosis; urinary-tract infections associated with urinary calculi as in hyperparathyroidism, hyperuricemia, and cystinuria; and abnormal etiocholanolone metabolism.

19. Types of malignant disease most likely to be associated with fever are lymphoma, hypernephroma, tumors of the liver (primary and metastatic), biliary tree and pancreas, pulmonary neoplasms, and gastric and intestinal carcinomas.

20. In patients having cirrhosis, fever, in addition to being a primary manifestation of the cirrhosis, may be due to malignant transformation, tuberculosis, and bacteremia due to gram-negative enteric bacilli.

21. Causes of fever in victims of lymphoma, in addition to that which is "primary" and due to the lymphoma per se, include bacteremia, especially that due to gram-negative enteric bacilli; cryptococcosis; and urinary-tract infection, especially when retroperitoneal involvement causes ureteral compression.

22. Three diseases which may be manifested by "primary" fever and also in which bacteremia is of increased incidence are cirrhosis, acute leukemia and lymphoma.

23. Febrile states in which the causative agent may be visible on smears of the peripheral blood include spirillary rat-bite fever (*Spirillum minus*), relapsing fever (*Spirochaeta recurrentis*), leptospirosis, malaria, and certain bacteremias (staphylococcal, streptococcal, meningococcal, anthrax, plague).

24. Febrile states of nonbacterial origin which may be characterized by eosinophilia include parasitism (trichinosis, echinococcal disease), drug fever, and periarteritis nodosa.

25. Infections that may cause fever and hemolytic anemia include streptococcal infections, clostridial infections, malaria, splenic brucellosis, and bartonellosis.

26. Not uncommon infectious diseases causing fever and thrombopenia include splenic brucellosis, infectious mononucleosis, and Pseudomonas bacteremia.

27. Although most patients having fever of obscure origin appear to have had blood smears examined for malarial parasites, one should recall that it is most unusual for malaria to recur after a symptom-free interval of 1 or more years.

28. Febrile states in which one should rule out hyperglycemia include bacteremia due to gram-negative enteric bacilli, recurrent biliary-tract infection (associated pancreatitis), pedal cellulitis, furunculosis, and recurrent urinary-tract infection.

29. In fever of obscure origin a positive brucellar agglutination reaction does not necessarily indi-

cate brucellosis; other causes include prior use of Brucella protein nucleate (Brucellergen®), amnestic phenomenon, cholera vaccination, and acute tularemia (cross agglutination).[24-28]

30. In tularemia there are 3 serologic reactions that may be positive and cause diagnostic confusion: a rise in heterophile antibody titer, and nonspecific cross agglutination to Brucella and Proteus organisms, the latter possibly causing confusion with rickettsial infection.

31. In fever of obscure origin excretory urography may reveal hypernephroma, pyelonephritis, retroperitoneal lymphoma (causing lateral deviation of the ureters), idiopathic retroperitoneal fibrosis, and other types of uropathy such as calculi causing urinary-tract infection.

32. Splenic calcification in a patient having fever suggests tuberculosis, histoplasmosis, and brucellosis.

33. A splenic locus may be most commonly responsible for recurrent febrile reaction among patients having "chronic" localized brucellosis.[26]

34. Fever occurs in about 90 per cent of patients having "acute" bacteremic or serologic brucellosis, but in less than 50 per cent of those with "chronic" localized brucellosis.[28]

35. In fever of obscure origin marrow aspiration may be diagnostic; possible diagnostic findings include acute leukemia, pernicious anemia, metastatic malignancy, infectious granulomas (histoplasmosis, tuberculosis, brucellosis), and aplasia or agranulocytosis.

36. In fever of obscure origin liver biopsy, in addition to revealing primary hepatic disease (hepatitis, cirrhosis, hepatoma), may be diagnostic of more diffuse disease, including metastatic malignancy, lymphoma, and infectious granulomas.

37. In fever of obscure origin biopsy of a lymph node also may reveal similar diagnostic findings, that is, metastatic malignancy, lymphoma, and infectious granulomas. Cervical, supraclavicular, or axillary nodes are most likely to be diagnostically productive.

38. Muscle biopsy in fever of obscure origin may reveal periarteritis nodosa, dermatomyositis, and trichinosis.

39. Specific bacterial diseases likely to be manifested by fever and arthritis are brucellosis,[27] gonorrhea, tuberculosis, salmonellosis, and meningococcemia.

40. Acute febrile bacterial arthritis unassociated with specific diseases most commonly is due to staphylococci, streptococci, and gram-negative enteric bacilli, in that order.[29]

41. Three mycoses that may cause intra-abdominal disease are actinomycosis, South American blastomycosis, and histoplasmosis. Three mycoses that may cause disease of the central nervous system are cryptococcosis, coccidioidomycosis, and nocardiosis. Three mycoses that may cause endocarditis are candidiasis, histoplasmosis, and coccidioidomycosis.[13,14,30]

42. Nonbacterial infections that may be complicated by orchitis are mumps, Coxsackie disease, and Q fever.

43. Viral infections causing a so-called biphasic fever curve include dengue, Colorado tick fever, and Coxsackie and ECHO diseases.

44. Microörganisms causing abortion in animals and responsible for febrile infections in man, in addition to Brucella organisms, are Leptospira, Vibrio fetus, and *Toxoplasma gondii*.

45. Five infections that may be complicated by peripheral gangrene are pneumococcal bacteremia, meningococcemia, bacterial endocarditis, cholera, and Rocky Mountain spotted fever.

46. In view of the decreased incidence of tuberculosis, of the febrile states that may be complicated by amyloidosis one considers these possibilities: osteomyelitis, leprosy, periodic fever, pyelonephritis, and bronchiectasis.

47. Persistent fever following cardiac operations raises the question of complicating endocarditis, which most commonly is due to *Staphylococcus aureus*, Pseudomonas, and Candida.

48. Fever continuing after apparent control of bacteremia suggests uncontrolled underlying infection (pyelonephritis) or conditions causing primary fever (lymphoma), metastatic suppuration, endocarditis, phlebitis, and drug fever.

49. In bacterial meningitis persistent fever despite adequate antibacterial therapy raises the question of drug fever, subdural effusion, and superinfection; in superinfection Pseudomonas organisms may be introduced via a contaminated needle at the time of a spinal tap.

50. The 5 microbial species most likely to cause superinfection complicating tetracycline therapy are *Staphylococcus aureus*, *Streptococcus pyogenes*, Candida, Pseudomonas, and enterococci.

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Clinical Orthopedic Problems in Children*

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THIS ESSAY will deal with 3 categories of orthopedic problems: congenital, developmental, and infectious. In each category a few of the more common entities will be mentioned with a brief discussion of etiology, salient points in diagnosis, and treatment. Only the lower extremities will be considered under the first 2 categories.

Congenital Anomalies

Toeing In

The most common presenting symptom in infants and children is toeing in. The parent or physician may recognize this in infancy or later in childhood because of a "pigeon-toed" gait pattern. The cause may lie in the femur, tibia or foot, or there may be a combination of levels of abnormalities.

Femoral torsion. The normal infant has about 25° of internal femoral torsion at birth (anteversion of the femoral neck), and this is normally reduced to about 12° to 15° in adolescents. Persistence of internal femoral torsion leads to a toeing-in gait. The diagnosis is established by the gait pattern, in which the entire extremity is internally rotated with the child in the supine position with the hips extended. A child with excess internal femoral torsion may exhibit up to 90° of internal rotation at the hips with absent or markedly reduced external rotation. The treatment in infancy consists of application of external rotation splints. This treatment is only mildly successful. In the child with mild persistent torsion no treatment is required. The more severe cases may require subtrochanteric external rotation femoral osteotomies. The indications for this are acetabular dysplasia and the tendency toward the unsightly deformity of excess tibial external torsion.

Internal tibial torsion. This extremely common anomaly is easily diagnosed in infancy. On examination of the infant with the knee fully extended and foot aligned anatomically at the ankle, the toes and foot are found to point inwardly. The average child is born with slight external tibial torsion, or with the leg in neutral position. The external torsion slowly increases until it averages 20° to 25° in the adult. The presence of internal torsion in an infant beyond 3 months of age is indication for treatment. The treatment is simple and highly effective and requires only the wearing of an external rotation night splint until the internal rotation is corrected. The average time required is 2 to 4 months.

Clubfoot (talipes equinovarus). This has as 1 of its 3 elements a turning in of the forefoot. A clubfoot is best corrected by application of plaster of paris casts following the Kite technique. Concomitant internal tibial torsion is often present and can be corrected simultaneously. Treatment should begin as soon as practical after birth, usually in the second or third week of life.

Metatarsus varus or adductus. This anomaly, referred to by some as a third of a clubfoot, consists of a turning in only of the forefoot. Treatment in the mild cases may consist of only manual stretching. More severe cases should be treated by application of plaster casts. A large number of children with metatarsus varus ultimately develop an abnormally high-arched foot.

Congenital Dislocation of the Hip and Acetabular Dysplasia. A small percentage of children diagnosed as having congenital dislocation of the hip actually have this abnormality present at birth. In the greatest number of cases the birth anomaly is acetabular dysplasia, and during the first 4 to 6 months of life the hip dislocates. The recognition of acetabular dysplasia in the newborn and appropriate treatment will, in most cases, convert a hip that could have become a dislocation into a normal one. The sign in infancy of hip dysplasia is limitation of abduction. Roentgenograms should be taken in all suspected cases. Treatment consists of the application of an abduction splint that is worn continuously until the range of abduction and the acetabular angle by roentgenogram determination have returned to normal. In infants with acetabular dysplasia care should be taken not to stretch the hips into extension. The infants presenting a frank dislocation exhibit the classical signs so familiar to all, namely, a shortened limb, abnormal thigh creases, limitation of abduction, and telescoping of the hip. The child that is walking will exhibit the typical painless Trendelenburg gait of a dislocated hip.

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The etiology of all these congenital anomalies is not completely understood. Acetabular dysplasia, clubfeet, and metatarsus varus are seemingly genetically predetermined. The other abnormalities may represent minor developmental and intrauterine positional defects.

Developmental Conditions

Pes planus, or flatfoot. This condition has for too long a time occupied a maligned position in medicine. Few, if any, conditions in childhood are the subject of such needless expense or concern. At birth every normal child has a foot that appears unusually flat, due to the presence of a protective fat pad beneath the longitudinal arch. This pad disappears at about 2 years of age, and the general pattern of foot structure becomes apparent. A child with a more than average degree of flatfoot usually has 1 parent with a similar foot structure. The only flatfeet in infancy that require treatment are talipes calcaneus and congenital vertical talus. These feet are characterized by undue prominence of the medial side of the foot, forefoot pronation and a "rocker bottom" appearance when the foot is extended. In mild cases reversed clubfoot type casts may be used. In severe cases surgical correction is necessary. The average flatfoot of childhood is asymptomatic and requires no treatment. The general shape of the child's foot will remain the same no matter what type of shoe is worn. There is no corrective shoe. Shoes are supportive only, and the so-called orthopedic shoes are indicated only in feet that are symptomatic. The best indication of functional foot balance is the inspection of a worn shoe. If the area of wear is uniform, no matter what the appearance of the foot may be the footgear cannot be improved upon.

In children approaching adolescence foot pain may develop along the longitudinal arch. If supportive shoes do not give relief surgical measures may be indicated. A few flatfeet may cause severe pain and spasticity or rigidity. These feet may exhibit congenital fusion of tarsal bones or premature arthrosis of the peritalar joints. Surgical treatment is usually necessary in these cases. Exercises will improve postural gait patterns and reduce fatigue symptoms but do not alter the foot's configuration.

Legg-Calvé-Perthes' disease and slipped capital femoral epiphysis. These must always be borne in mind as common causes of hip disability. The former is found in the age group of 4 to 7 years, the latter in adolescents. The etiology of both is obscure but is probably related to a developmental vascular abnormality. The symptoms of these conditions are similar in that there is a limp, positive Trendelenburg, pain, limitation of hip motion, and frequently pain about the knee. Knee pain of the referred type may precede by weeks pain in the hip area. Roentgenograms of the hips in the anteroposterior and lateral views, with the legs in the "frog leg" position, must be taken. Repeated films may be necessary. The ultimate progress in these conditions is dependent largely on the stage of recognition.

The treatment of Legg-Calvé-Perthes' disease consists of protection of the hip from weight-bearing until the capital epiphysis goes through the stages of avascular necrosis, revascularization, and reossification. This period may extend from 1 to 3 years. Bed rest and traction are commonly employed during the stage of pain and muscle spasm. This is followed in the unilateral case by suspension of the leg by a sling and ambulation with crutches. In bilateral cases leg casts and complete bed rest are necessary. The prognosis is better in the younger age group and in those in whom the diagnosis is established early in the disease.

The treatment of slipped capital epiphysis varies with the stage at which the disease is diagnosed. In mild cases in which the slipping is 25 per cent or less immobilization in a plaster spica until the epiphysis fuses may give satisfactory results. Manipulation and plaster immobilization have not given good results universally although they are still used by some. The internal fixation of the epiphysis, in the less severe cases, by threaded pins is practiced by most surgeons. More severe degrees of slippage require femoral osteotomy for realignment of weight-bearing surfaces. Bilateral slipping is common and is found in 30 to 50 per cent in most large series.

Variations of the linear alignment of the legs at the knees. These are not uncommon. The resultant bowleg (genu varum) or knock knee (genu valgum) is usually bilateral. The differentiation of developmental or "physiologic" knock knees or bowlegs from causes other than rickets and Blount's disease (genu varum) is important. The developmental knee abnormalities are characteristically seen in children who are normal at birth and infancy but who walk early and may be overweight. The course of the condition is characteristic. The abnormality is progressive for several months or a year and then regresses. The spontaneous correction may be, in fact, so great that overcorrection is produced with the appearance of the opposite deformity. The deformity resulting from overcorrection then corrects itself. In some instances braces may be indicated to initiate the corrective force. Surgery is rarely indicated and never should be performed in the first few years.

Infections

Acute hematogenous osteomyelitis. This former scourge of infancy and childhood has been quantitatively reduced since the advent of penicillin and antibiotics but has not been eliminated. There has been an increase in the number of cases seen since 1956. The child with acute hematogenous osteomyelitis is extremely ill, with all of the clinical signs of an acute systemic infection. The local signs of bone involvement include swelling, loss of function, tenderness, and increased local temperature. The roentgenograms are normal early in the disease except for soft tissue changes. One must suspect acute osteomyelitis in every severe acute illness in infancy and childhood. In children under 1 year of age the clinician must be alerted to the possibility of involvement of adjacent joints, since early removal of pus from a joint cavity is imperative if joint function is to be preserved. The infective organism can usually be recovered by blood culture and appropriate therapy continued or modified. Some broad spectrum antibiotic, plus penicillin, is prescribed at the onset. The dosage should be large. The local lesion should be immobilized by plaster casts or other appropriate measures. Surgical intervention should be carried out whenever a local accumulation of purulent material is suspected. This normally entails the evacuation of a subperiosteal collection of pyogenic exudate, and direct attack upon the bone by fenestration is also necessary. In the case in which the clinical improvement is constant the antibiotic or penicillin therapy should be continued for a minimum of 6 weeks. The best possibility for a complete cure is during the acute stage. Massive and prolonged therapy is therefore indicated.

Pyarthrosis. Suppurative arthritis of infancy and childhood may be secondary to osteomyelitis, septisemia, or a complication of infections about or within joints. The last named is not an infrequent complication of repeated femoral vein punctures. The joints most commonly involved are the hip, knee, and shoulder. The organism usually responsible is the staphylococcus. In infants under 1 year of age the streptococcus, pneumococcus, and less frequently gram-negative bacteria, usually *B. coli*, or *B. pyocyaneus*, may be the causative organism.

The child may show signs of a severe febrile illness, but frequently the disease has mild systemic manifestations. An infant who suddenly exhibits local signs of joint dysfunction when a febrile illness is known or suspected must be considered to have a pyarthrosis. An early diagnosis is essential if the joint is to be spared irreparable damage. The proteolytic enzyme(s) present in the pyogenic exudate can destroy the articular cartilage within hours. In addition, the accumulation of pus within a joint may lead to subluxation. The systemic infection may be controlled by antibiotics and other measures. The local pyarthrosis must be evacuated by needle aspiration plus saline irrigation or open drainage. Any joint suspected of containing purulent exudate should be aspirated.

The Siamese Twins: Some Observations on Their Life, Last Illness and Autopsy*

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Washington

SOME YEARS AGO in an antique shop in Camden, South Carolina, I asked my usual question, "Have you any old medical books?" To my surprise and delight, 15 bound volumes containing about 500 reprints collected between 1874 and 1899 were shown me. Most of these reprints were inscribed by their distinguished or obscure authors to Dr. William H. Geddings of Aiken, South Carolina, and the flyleaf of some of the volumes bore the name of Dr. Charles Fourgeaud McGahan.

These reprints spanned the whole of medical literature of the day. One of the papers particularly interested me and started me on a search of the literature. It was entitled "Report of the Autopsy of the Siamese Twins Together with Other Interesting Information Concerning Their Life." This was reprinted from *The Philadelphia Medical Times* in 1874 and inscribed to Dr. Geddings by Dr. Charles E. Sower.

The Siamese Twins (figure 1), Chang (left) and Eng (right), were born near Bangkok in 1811 to a Chino-Siamese mother and a Chinese father. From birth they engaged the interest of all who saw them. At first the stout, cartilaginous, ligamentous attachment which joined them at their xiphoids was short and rigid, but as they grew the ligament stretched so that they could stand side by side and even back to back. They ran, jumped and swam with ease and astounding coördination. In fact, their activities in the water drew them to the attention of Mr. Robert Hunter, a British merchant in Siam. He first thought he had encountered some strange new amphibious animal. In spite of Mr. Hunter's entreaties he was not allowed to take them to England for exhibition. Later, Mr. Hunter and Captain Coffin of an American ship, the *Sachem*, prevailed upon the mother and the King of Siam to allow them to be taken abroad. The 18-year-old twins arrived in Boston in 1829 and were immediately the center of great lay and medical interest. Professor J. C. Warren made studies of the connecting band between Chang and Eng and concluded that the band was largely cartilage with an insignificant number of connecting vessels, lymphatics and small nerves. He thought, however, that there was probably a continuous peritoneal cavity within the band which would make attempts at surgical separation hazardous and unwarranted. Other leading American physicians largely concurred in Warren's opinion.

In October of 1829 Chang and Eng were enthusiastically welcomed in England and created enormous interest. They were studied and reported in medical journals by Sir Astley Cooper, Sir James Y. Simpson, and many medical leaders in Great Britain. Great interest was shown in the question of whether circulatory connections existed between the twins. Sir James Y. Simpson found that when potassium iodide was given to 1 twin no iodide reaction was found in the urine of his partner. Professor G. B. Bolton fed asparagus to Chang and found its characteristic odor in his urine but none in Eng's. It was considered significant that although Chang drank heavily, Eng was never affected, even when his brother was drunk. On the Continent medical authorities also studied Chang and Eng. Virchow published 2 papers about them and emphasized their origin from a single ovum.

The exhibitions in England were attended by great throngs. One old gentleman, who suspected that the twins were a hoax, was allowed to examine the fleshy band. He then asked, "Are they brothers?" Another curious person wanted to know whether they were the same age. A rather greedy young British lady became enamored of Chang and Eng. She probably thought that if 1 husband is good 2 might be better and wanted to marry them. When told that she would end up in the dock as a bigamist she lost interest and quickly married "a heavy whiskered commercial gent."

Despite their immersion in show business,

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Chang and Eng remained basically gay, good-natured, shrewd country boys with simple wit. They suggested that a 1-eyed customer should be refunded half his admission price, and to a legless cripple they generously offered money and cigars to atone for the fact that they had 4 arms and legs between them. To familiarities they reacted violently as one individual learned by squeezing Chang's hand too hard. Chang struck him, whereupon the hand-squeezer applied for assault and battery warrant. He was told by the magistrate that he could have a warrant for Chang, but that if he had Eng arrested also he would be subject to prosecution for false arrest.

On occasions they were great jokesters. Once, in a playful mood Chang and Eng boarded a train with only 1 ticket. Around their shoulders they wore a generous cape which concealed the connecting band. The conductor first asked Eng for his ticket. He said he didn't have one, so the conductor told him to get off the train. "Very well," said Eng. He arose to go, accompanied by his brother. "But I have a ticket," Chang protested, "and if you put me off, I'll sue the railroad."

At times they quarreled. On a hay wagon one hot day, their feelings grew so warm they began to wrestle. "Let go!" Chang shouted to Eng, "Let go or I'll throw you off the wagon!"

Chang and Eng, having amassed a considerable competency and tiring of exhibition, became naturalized United States citizens. They took the surname of Bunker (North Carolina corruption of Bon Coeur) from that of a friend. They settled in Surrey County, North Carolina near Mt. Airy, where they became competent and prosperous farmers. In 1843 they married 2 daughters of a Virginia clergyman, Daniel Yeats,—Chang to Adelaide and Eng to Sarah Ann. Adelaide had 10 children and Sarah Ann 11. Their descendants are respected citizens of North Carolina. One of them was a college classmate of my brother and carried the nickname of "Chink." It is not the purpose of this paper to enter into speculation upon the conjugal arrangements of Chang, Eng, Adelaide and Sarah Ann. Possibly some imaginative member can report on his conjectures as to this at a later date. However, as the families grew it was found necessary in the interest of peace and domestic felicity for the twins to move their families to separate houses about a mile apart. A firm pact was made that Chang and Eng would spend 3 days in one home and then 3 in the other.

Chang and Eng suffered financially after the Civil War, particularly as a result of the loss of their slaves. My cousin, Major Henry London, on returning home after Lee's surrender, became interested in the twins. His daughter wrote me recently, "After the War Between the States, my father, who was 18 years old, and his brother-in-law went to see the Siamese twins in Mt. Airy to see if they would be interested in making some money (as everyone in the South was broke) and be exhibited again in the North. They were delighted over the idea, so father and Mr. Zimmerman became the advance press agents, going to various organizations and displaying the pictures of the Siamese twins. When they came to Baltimore and the fashionable resort of Cape May, Mr. Zimmerman would stay in his room as he was so afraid he would be seen by some of his friends. They did this for a season and all made some much needed money."

In spite of some earnings due to cousin Henry's help, Chang and Eng soon went to Europe again under the more expert direction of P. T. Barnum. While aboard ship returning to America in 1870, Chang had a paralytic stroke during one of his increasingly frequent alcoholic debauches. This involved his right (medial) arm and leg, and thereafter, on their return to Mt. Airy, Eng carried much of Chang's weight.

On Monday, January 12, 1874 Chang developed a "dry cough with scanty, frothy sputum." He complained, too, of pain in his chest. Dr. William Hollingsworth, his family physician, directed that he not venture out. However, on Thursday, the usual day to move to Eng's house, they went there in an open buggy in very cold weather. Eng remained in excellent health throughout Chang's illness. On Friday Chang felt better, but that night he "had such severe pain in the chest, and so much distress he thought he would die." The twins slept in a room by themselves or with only a young child present, and sometime within the course of the night they got up and sat by the fire. Eng wanted to retire, but Chang insisted upon sitting up as his "breathing was so bad that it would kill me to lie down." Finally, about one o'clock they went to bed, and after an hour or so the family heard someone call, but no one went to them. Later Eng awakened and asked his young son, "How is your Uncle Chang?" The boy said, "Uncle Chang is cold—Uncle Chang is dead." When his wife entered the room Eng began crying out to her, "My last hour is come; I am dying." He did not speak of his brother's death. "He expressed a desire to defecate and this continued for half an hour. He rubbed his upper extremities and raised them restlessly, and complained of a

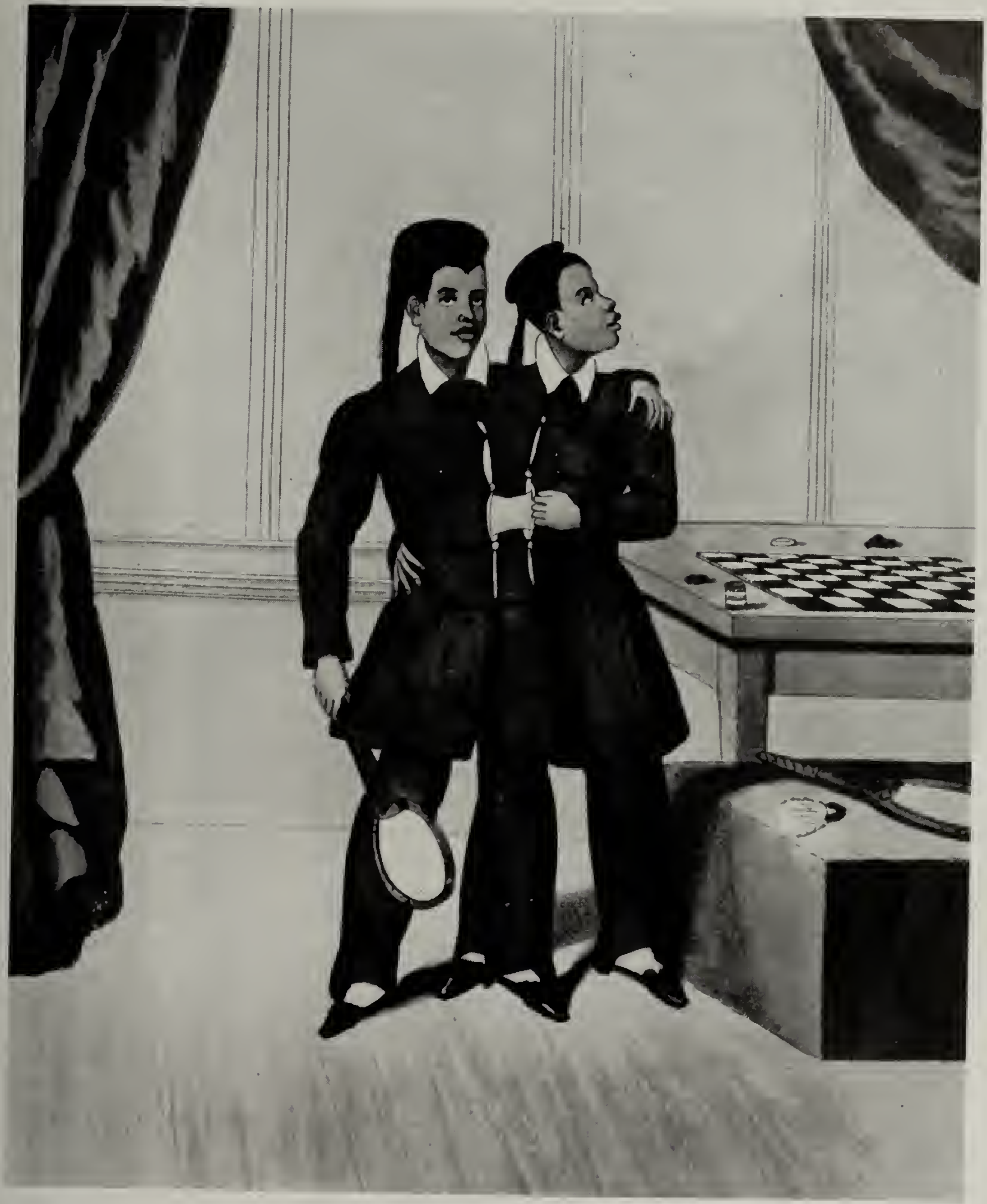

FIG. 1. Engraving of Chang and Eng made in London in 1829, from the collection of The National Library of Medicine.

choking sensation. The only notice he took of Chang was to move him nearer. His last words were, 'May the Lord have mercy upon my soul.' "

Dr. Hollingsworth did not reach the house until both twins were dead. Though the families were averse to an autopsy he obtained consent to put the bodies in a position to be preserved until he could obtain someone from Philadelphia to perform one. The bodies were cooled, placed in a coffin which was put in a wooden box and in its turn enclosed in tin, the whole being buried in the dry cellar in such a way as to be imbedded in charcoal. But let William Augustus Reich, the local tinsmith, in a letter written to his sister from Mt. Airy on January 19, 1874, tell about the coffin:

"Dear Darling J

"I write you a few lines this morning. I expect you heard the Siamese twins are dead. I got an order late Saturday evening for a large tin coffin. I made it.

I worked nearly all night, finished it about noon yesterday. Cut out yesterday afternoon and soldered them up. It was a sight the people that was there. It was a long time before I could get my foot in at the door, so crowded. It was like a camp meeting so many people, horses and carriages. It was most night before I got through soldering them up. They were not going to bury them but keep them in the house. I expect they are afraid somebody would steal them. The Siamese twins is the greatest human curiosity in the world, and whoever thought I would be the man to solder them up? I had to cut into 34 big sheets of tin to make the coffin. I have a notion to charge $20. Do you think that would be about right? Their death was sudden and unexpected on Friday night late. . . . All the doctors went out Saturday morning prepared to cut them apart, but they were both dead when they got there. I heard somebody say that Chang had always been accustomed to liquor but had not used any for a few days and perhaps caused a reaction. I wrote a letter to Edward Blum and he will probably put something in the paper about it. They were both real business men and have large families. I hope this will find your Leander doing well. Mary sends much love, also respects to Martha. The Siamese twins were nicely dressed in black with slippers on. I helped lift them in their coffin. It was a strange sight. I must close now, with our best love I remain

Affectionately
Augustus

"It was a sight to see the people that came to my house to see me make the coffin. It was the greatest job I ever done. I send you a drop of solder that dropped off the coffin as I was soldering them up yesterday."

Shortly after the death of the twins Dr. William Pancoast requested the Mayor of Philadelphia to telegraph the Mayor of Greensboro seeking an autopsy. The Mayor of Greensboro replied that he had no knowledge or power in the matter. A week after the death Dr. Hollingsworth met with Dr. Pancoast and Professor Gross in Philadelphia, and a letter was dispatched to the wives proposing that Dr. Pancoast come to embalm and examine the bodies. A commission consisting of Dr. Pancoast and Dr. Harrison Allen, with Dr. Andrews as companion and aide, arrived in Mt. Airy on January 31, 2 weeks postmortem. At a conference with the widows it was agreed that, under consideration of embalming the bodies, permission would be granted to exhume and to examine the structures distinguishing them, providing that no incision would be made that would impair the external surface of the band. Later a written agreement allowed the bodies to be taken to Philadelphia, if kept safe in a fireproof building.

Great and curious crowds gathered, eager to help the Commission exhume the bodies, which were carried to a large chamber for photographs and autopsy. The room was then cleared of all except the Commission. The bodies were found well preserved. Embalming was begun. It was found that the aortas of both twins were highly atheromatous, Chang's so much so that the chloride of zinc had to be injected through the primary iliac arteries rather than downward through the aorta. It was soon found that with limitations as to incision, a better autopsy could be done in Philadelphia. Back the bodies went into the coffin and into Gus Reich's tin masterpiece and into an express car, thence to the College of Physicians in Philadelphia. There the bodies were placed under the care of the Committee on The Mutter Museum and were closely locked and guarded.

At a well attended, special meeting of The College of Physicians on February 18 the Commission exhibited the bodies and demonstrated their findings. These indicated that the band of union connected the twins at the ensiform. It contained peritoneal pouches and an extension of liver substance from each abdomen. Vascular connections were sparse, but colored plaster material injected into the portal circulation of Chang was found to flow into Eng's portal vessels as far down as mesentery. The limitations as to the extent of the autopsy left certain anatomic features unclear. It was found that the apices of the hearts "present toward each other." Although the lungs showed postmortem changes and could not be well examined through the allowed incision, no area of "hepatization" could be felt in Chang's lungs. The livers approximated each other, and tongues of liver pushed through the peritoneal openings. Chang's bladder was found contracted and empty, while Eng's was markedly distended with urine.

In discussion of his findings before The College Dr. Pancoast made no statement as to the cause of Chang's death but said, "What caused Eng's death? I am not able to tell. Probably the valves of his heart were in a disorganized condition, and probably also the shock upon that weakened organ caused death."

Dr. Harrison Allen said, "In my opinion, Chang died of a cerebral clot. From inquiry at his home I was led to believe that the lung symptoms were not due to pneumonia, indeed, were not severe enough to have been so caused. The suddenness of the death, the general atheroma of the arteries, and the fact that there has been previously an attack of cerebral paralysis, all indicated that the death was of cerebral origin. Eng probably died of fright, as the distended bladder seemed to point to a profound emotional disturbance of the nervous system, the mind remaining clear until stupor came on, a stupor which was probably syncopal!"

And now, having been self-appointed to conduct this clinicopathological conference, it is my turn to express an opinion. It is known that Chang had severe atherosclerosis and had suffered a cerebral thrombosis. Five days before his death he developed a cough productive of frothy sputum and some chest pain. On the night of his death he had "such severe pain in his chest he thought he would die." And, too, when Eng wanted to retire Chang refused, as his "breathing was so bad that it would kill me to lie down." Nevertheless, Chang later did lie down and died while lying down. His death was quiet and did not awaken Eng. This would indicate that Chang's death was not due purely to the pulmonary edema. It was probably sudden, as from an abnormal rhythm. It appears to me that the diagnoses in Chang's case were (1) xiphopagic twin, (2) generalized atherosclerosis, (3) coronary atherosclerosis, (4) myocardial infarction, (5) congestive heart failure with pulmonary edema, and (6) arrhythmia, probably ventricular fibrillation.

In Eng's case I fully agree with Dr. Harrison Allen. Eng died of fright. If any of you doubt this, try being joined to a dead xiphopagic twin!

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Seminiferous Tubule Dysgenesis in a Fourteen-year-old Prepubertal Boy with Microphallus

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In 1942 Klinefelter, Reifenstein and Albright[1] described a group of postpubertal males with gynecomastia, eunuchoidal habitus, azoöspermia, normal or decreased urinary excretion of 17-ketosteroids, increased urinary excretion of follicle-stimulating hormone, and small testes with atrophy and hyalinization of seminiferous tubules but abundant Leydig cells. Klinefelter's syndrome or seminiferous tubule dysgenesis has been recognized with increasing frequency since the original description.[2]

Observations on prepubertal patients with seminiferous tubule dysgenesis are limited, since the only criterion for diagnosis at this time is the presence of a "positive" chromatin pattern. There are a few isolated reports of chromatin-positive prepubertal males in the literature.[3, 4, 5] Small groups of such patients, however, have been discovered in surveys initiated by abnormal physical findings, such as hypospadias,[6] and by screening mentally deficient prepubertal males.[7] Others have been found on routine survey of newborn boys with no physical or psychologic abnormalities.[8]

Report of Case

D. T., a 14-year, 2-month-old white boy, was referred to us (W. H. and E. E. F.) for investigation of microphallus. There had been no serious illnesses, and mumps and orchitis were specifically denied. His growth and development were normal until approximately 12 years of age, at which time the boy noticed that his penis and body hair were not undergoing the normal pubertal development

Physical examination showed an obese boy whose height was 63¼ inches and whose weight was 164 pounds. The habitus was not eunuchoid; the upper: lower ratio was 0.97 (normal for his age). His intelligence was considered to be normal. His voice was not deep. Gynecomastia was not present. No facial or axillary hair was present, and there were only a dozen short pubic hairs but no true sexual hair. The penis was very small and measured 4.0 cm. in length and 2 cm. in diameter when the suprapubic fat was pushed back to the symphysis pubis. In a study published by Schonfeld[9] the length of the penis for 14-year-old boys varied between 5 and 13 cm., with a median length of 9 cm. The scrotum was small, and the skin did not show any pubertal signs. Each testis measured 1.0 by 1.5 cm.; both were firm in consistency. The prostate gland was not palpable. The findings on physical examination were otherwise unremarkable.

Results of routine laboratory examination were all within normal limits. A smear of the buccal mucosa showed 60 to 70 per cent of the cellular nuclei to be chromatin-positive (i.e., female chromatin pattern). Urinary excretion of 17-ketosteroids (Zimmerman method) was 5.3 mg. per 24 hours. The 24-hour excretion of gonadotropin was positive at 7 rat units. Skull X-ray films were normal, and the bone age was 13 years. Chromosome analysis of the leukocyte culture of peripheral blood, performed by a modification of the technic of Moorehead et al,[10] indicated the presence of 47 chromosomes with an XXY sex chromosome pattern (figure 1). Biopsies of both testes were performed by one of us (E. E. F.). Microscopic examination of the gonadal biopsies revealed testicular tissue. The tubules were surrounded by delicate fibrous tissue, and there was an almost complete absence of Leydig cells. The tubules had no lumina and contained undifferentiated cells and Sertoli cells, and only rarely could spermatogonia be identified. There was a moderate variation in tubular diameter, the larger ones showing the presence of germinal cells. Central eosinophilic, round bodies resembling corpora amylacea were detected in an occasional tubular lumen (figure 2).

The patient recovered from the surgical procedures uneventfully. He has been treated with testosterone with subsequent development of secondary sexual characteristics.

Discussion

Because the usual clinical features of seminiferous tubule dysgenesis are almost entirely manifestations of testicular failure, the diagnosis is usually made only after puberty. The typical physical findings include gynecomastia, eunuchoid habitus, nearly normal penis and body hair, absence of beard, and small testes. Urinary excretion of gonadotropins is high, indicating that the testicular defect arises primarily in the testes and is not secondary to pituitary failure. The level of urinary 17-ketosteroid excretion is usually within normal limits.

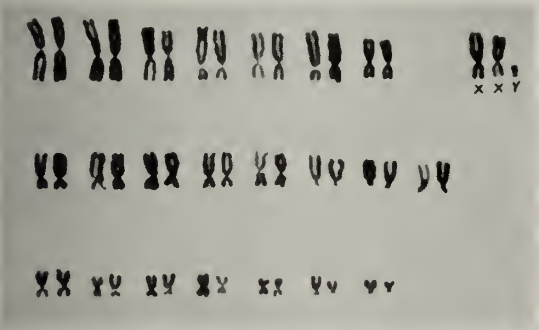

FIG. 1. Karyotype of chromosome pattern obtained from leukocytes grown in tissue culture.

Since the introduction of chromatin sex determination by Barr and Bertram,[11] the presence of a characteristic nuclear structure for the somatic cells of each sex has been firmly established. Such chromatin masses are found in only a few of the somatic cells of normal males. It has been found that approximately 80 per cent of patients with seminiferous tubule dysgenesis have a chromatin-positive (female) pattern while the remainder have a chromatin-negative (male) pattern.[12]

The chromosome number of man is now firmly established at 46, the haploid complement as seen in germ cells consisting of 22 autosomes and 2 sex chromosomes paired in the female (XX) and unpaired in the male (XY).[13,14] Jacobs and Strong[15] and Ford and his associates[16] were the first to show that patients with chromatin-positive seminiferous tubule dysgenesis have 47 chromosomes, and the extra chromosome is one of the sex chromosomes, giving these individuals a sex complement of XXY. Chromatin-negative patients with seminiferous tubule dysgenesis have a normal complement of 46 chromosomes.[17,18] Some exceptions to the generalization concerning the association of seminiferous tubule dysgenesis with the XXY chromosome complement occur. Several variants have been described: XXXY, XXYY, the mosaic XXY/XY, and XXXXY.[16,19,20,21]

The histologic changes found in testicular biopsies of patients with seminiferous tubule dysgenesis are not pathognomonic, regardless of whether they are obtained before or after puberty. Atrophy, absence of germ cells, and tubular fibrosis are nonspecific changes and may be observed with cryptorchidism and aging, and in testicular disorders of known exogenous origin.[22] The small diameter of the immature hypoplastic, fibrosed tubules does, however, suggest that the changes occurred before the tubules reached adult size.[2] Nevertheless, the complete picture of tubular fibrosis, germinal aplasia or hypoplasia, variation of tubular diameter, and nodular hyperplasia of interstitial cells in the adult patient with seminiferous tubule dysgenesis is fairly characteristic.

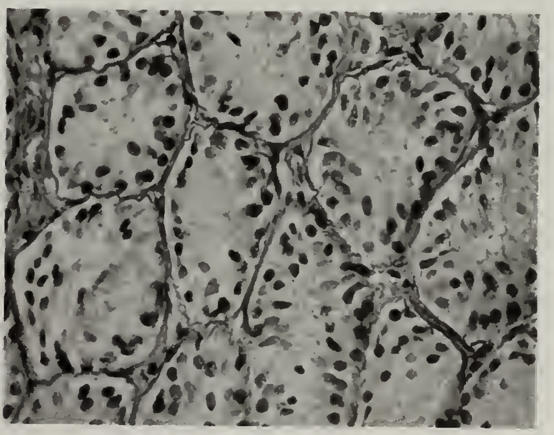

FIG. 2. High-power photomicrograph of testicular biopsy.

Before and during early puberty the testicular histologic appearance is quite different. Histologic observations on a small number of these cases have been reported,[3,4,5,23,24] and tubular fibrosis as well as interstitial-cell hyperplasia were found to be virtually absent as in our patient.

Although there is normally a wide variation in the numbers of spermatogonia, Ferguson-Smith[7] thinks that their reduction is greater than is usually seen in normal individuals of the prepubertal age group and that it occurs with such a uniformity as to be significant. Among his 8 patients he found that the highest percentage of "fertile" tubules did not exceed 20 per cent. Maturation of these "fertile" tubules during puberty as evidenced by their enlargement and the differentiation of the Sertoli and Leydig cells probably accounts for the variability of tubular size as it is seen in adult patients with Klinefelter's syndrome.

Some authors[3,5,23] observed round bodies of approximately 30 to 40 microns in diameter in the center of some tubules; these bodies crudely resemble ova, and the surrounding ring of sustentacular cells suggestive of a corona radiata enhanced the resemblance. We have detected such structures in other instances of germinal aplasia, such as crytorchidism, and believe that they are not ova but most likely represent products of secretory or degenerative origin; their frequent lamination suggests concentric shells of deposited material.

Although observations on prepubertal patients with seminiferous-tubule dysgenesis are limited, these studies demonstrate that the only morphologic abnormality in these individuals is absence or great decrease in germinal cells in the testes.[23,24,25] Not until the onset of puberty with the progressively increasing amounts of gonadotropin do the typical tubular fibrosis of hyalinization and the interstitial-cell hyperplasia develop.[25,26] The degenerative changes progress so that small, firm testes, azoöspermia, and elevated gonadotropin levels are constant findings.

Early diagnosis in the present case was made possible by the finding of microphallus, which prompted a determination of the sex chromatin pattern. This genital abnormality has been reported previously in association with prepubertal patients with seminiferous tubule dysgenesis.[3,5] It is important to note that this patient did not have most of the usual features of this syndrome, probably because of the relatively early age at which the diagnosis was made. It is, therefore, important to consider the diagnosis of seminiferous tubule dysgenesis in any boy with microphallus and without the usual clinical features associated with this syndrome. The presence of a chromatin-positive pattern in a phenotypic male assures the diagnosis, excluding the extremely rare instance of true hermaphroditism. Chromosomal studies and biopsy of the gonads allow differentiation of these 2 entities.

Summary

A case of seminiferous tubule dysgenesis has been reported in a 14-year-old prepubertal boy who has microphallus and small testes. Biopsy of the testes revealed changes similar to those previously reported in prepubertal patients. The diagnosis of seminiferous tubule dysgenesis was confirmed by sex chromosomal studies. The importance of considering this entity in any boy with microphallus is stressed.

N. B. The authors wish to express their appreciation to Dr. Anatole S. Dekaban for his preparation of the tissue culture and karyotype of the chromosome pattern.

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PRESIDENT'S PAGE

"USUAL AND CUSTOMARY"

This apparently innocent phrase has become the cause of much vexation in certain quarters. The term appears almost uniformly in Major Medical service contracts whether written by Blue Shield agencies or insurance companies. Use is made of it to indicate that the third party will pay a percentage (usually 75 to 80 per cent) of medical fees for which the insured becomes obligated provided such fees are "usual and customary" for the area involved, or words to that effect.

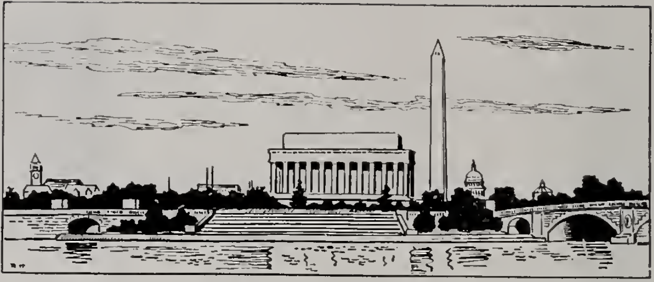
It devolves upon medical organizations as represented by the state and county medical societies to define "usual and customary" by setting limits to fees for medical and surgical procedures. This task must be delegated to an agency or arm of the medical organization, and in the Medical Society of the District of Columbia this is designated as the Review Board for Prepaid Medical Care Benefits.

This Board reviews cases in which the third party feels that the fee asked is exorbitant. It is significant that the number of such cases is relatively very small. Some of the conclusions reached by this Board, however, have engendered much unhappiness when the physician feels that he should be allowed to ask for a higher fee than that which is approved.

In any case where a higher fee is justifiable, nothing in the foregoing compromises the right of the physician to negotiate in advance the differential between his fee and the expected proceeds from the Medical Service Plan. The premiums on such Plans must be arrived at actuarily. It cannot conceivably be left to the third party to decide what is "usual and customary." It follows that the Review Board, representing the Medical Society, must do so.

Perhaps the whole concept of "usual and customary" is wrong, and there are many who think so. It is with us, however, for better or worse, and to change it would require action on a broad front. Major Medical contracts would have to be rewritten. Those who have ideas on this should bring them to the Medical Society and not berate the Review Board.

R C Corley



EDITORIALS

Poliomyelitis: Mass Immunization Program Reanalyzed

In the Medical Annals for June 1962 the Committee on Poliomyelitis reviewed the background leading up to the Committee's recommendation for an area-wide mass oral vaccination program. Again in September 1962 a request to the membership was made for support of this program. In these reports the superiority of a mass program over the individual use of a live oral polio vaccine by physicians was emphasized.

Plans proceeded through the Health Department, with the coöperation of this Medical Society and other interested groups in the area, for a mass program to be carried out on 3 separate days as follows: Type I on Sunday, October 7, 1962; Type II on Sunday, January 13, 1963; and Type III on Sunday, November 18, 1963.

For reasons beyond the control of this Committee and directly related to the pronouncements of the Public Health Service, this mass program was cancelled. In view of past recommendations of this Committee to its membership, it seems reasonable that a further statement should be made at this time.

On September 15, 1962, the Surgeon General's Oral Poliomyelitis Vaccine Committee recommended that Type III vaccine be limited to preschool and school-age children and to adults in high-risk groups, those traveling to hyperendemic areas, and those living in areas where Type III epidemics were present or impending. At that time they advised that mass programs using Types I and II oral vaccine be continued for all age groups. After further study of the situation, Surgeon General Luther L. Terry and his Advisory Committee on Oral Poliomyelitis Vaccine recommended on December 18, 1962 that communities planning immunization campaigns against poliomyelitis are urged to move ahead, using all 3 types of Sabin Oral Vaccine, with particular emphasis on children and young adults.

On January 18, 1963, the Committee on Control of Infectious Diseases of the American Academy of Pediatrics reviewed the report of the Surgeon General of the Public Health Service and supported the recommendation to resume the use of Type III oral polio vaccine in mass immunizations.

From the above it seems evident that the questionability of using any one or all of the Sabin Oral Polio Vaccine has been dispelled and that the Committee should approve in principle the use of these vaccines in a mass immunization program for this area. On the other hand, in view of the wide publicity received by the first report of the Surgeon General of the Public Health Service, some question continues to exist as to whether or not a mass oral immunization program would, at this time, be sufficiently acceptable to attract a substantial percentage of the public. The value of such a mass program is in direct proportion to the percentage of persons immunized. Therefore, it would seem that from a total public health viewpoint it is best to wait until there is evidence to show that the vast majority of the people in this area would avail themselves of the benefits of such a program. However, with each physician responsible for the health of his patients and with people continually coming to the District who have had Types I or II elsewhere, it seems evident that the statement of this Committee, published in the Annals in June 1962, should be rescinded. Further, the Committee believes that physicians should proceed to immunize all patients under age 30 and to coöperate with patients who have had Types I or II or both, completing their immunization

Opinions expiessed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia with Type III. Since both of the polio vaccines now available (Sabin and Salk) are recommended by the Public Health Service and endorsed by the Committee on Control of Infectious Diseases of the American Academy of Pediatrics, the choice of which vaccine to use must rest with each individual physician. Further, it is urged that the District Department of Public Health continue with its surveillance program to determine the possible imminence of polio in the District and that all agencies concerned keep in mind the necessity of evaluating the potential public acceptance of a community-wide program in sufficient numbers to make it a success. It is the consensus of this Committee that a community-wide program will be necessary at some future date if we are to take advantage of the vaccines now available. However, determination of possible public attitude and public acceptance is vital in the timing of such a program.

William S. Anderson, M.D.
Chairman, Committee on Poliomyelitis

VOLUNTEER CONTRIBUTIONS RECOGNIZED: Proudly displaying plaques received from the District of Columbia Division of the American Cancer Society, May 23, in recognition of their participation in more than 25 community endeavors are (left to right): Dr. S. Joseph Cosimano, Dr. Howard S. Madigan, Dr. Lois I. Platt, and Dr. William W. Funderburk. Story on page 294.

The 1963 ASA Program

I'm sure I can speak for the entire Committee when I say that developing a program for the District of Columbia Medical Society's Annual Scientific Assembly has been extremely interesting and educational. To begin with, we are dealing with a Society composed of approximately 80 per cent specialists who represent many fields of medicine. How, then, to offer a program that would be of interest to each member? The Committee believed also that to encourage attendance the program would have to be unparalleled in content with topics presented by men of exceptional ability in their respective fields. I'm sure when the program is studied all will agree that the Committee fulfilled these goals.

The topics selected for the first day, although generally in the field of surgery, deal specifically with indications for, selection of, and the whys and wherefores rather than technical aspects. In this way the surgeon, the ENT man, the internist, the general practitioner, etc. will benefit.

A new approach—socioeconomic rather than scientific—will be featured the second day. Provocative subjects of the greatest import to the practicing physician will be discussed: The control of medicine, by whom and how? What will our pharmacopoeia look like after drug laws become effective? Again, the discussions will be led by outstanding men in the fields of labor, hospital administration, and Government.

The third day's scientific sessions will be programmed by the Sections on Internal Medicine and Pediatrics, but, again, they will be aimed at most specialists and the general practitioner.

Sounds stupendous, but does the program really fulfill the aims? You will have to be the judge. The program was prepared with each individual Medical Society member in mind. Come out and see if we succeeded.

Frank S. Pellegrini, M.D.
Chairman, Program Committee,
Annual Scientific Assembly

The ASA Opening Day Program

It is generally agreed by all physicians that the heart of the Society's Annual Scientific Assembly is its scientific program. Accessories to a successful meeting are scientific and technical exhibits, medical motion pictures, and varied social affairs to generate good fellowship. Of special importance is the Opening Day scientific session.

With the above in mind and being cognizant of the fact that the Medical Society of the District of Columbia consists predominantly of physicians engaged in the practice of the various specialties, we exerted every effort to develop a scientific program that would appeal to members and to nonmembers, regardless of type of practice.

The Opening Day scientific program, on Monday, November 18, 1963, will consist of a series of papers on surgical subjects. Nationally known speakers have been requested and have agreed to emphasize the selection of patients, the indications and contraindications, and the results of treatment by modern-day surgical procedures rather than to elaborate on the actual surgical techniques.

The Program Committee began its work by choosing a variety of timely subjects and matching them with outstanding surgeons, who were subsequently invited to participate in the program. The Committee is pleased to announce acceptance from: Charles A. Hufnagel, M.D., Washington, D. C.; Michael E. DeBakey, M.D., Houston, Texas; Owen H. Wangensteen, M.D., Minneapolis, Minn.; George E. Shambaugh, Jr., M.D., Chicago, Ill.; Edward Gaensler, M.D., Boston, Mass.; and George Crile, Jr., M.D., Cleveland, Ohio.

We are confident that this year's ASSEMBLY will truly be "The Medical Event of the Year" in the Nation's Capital. Every detail in planning the Opening Day program was done with the individual member's interest in mind. Your attendance and active participation are now needed to assure its success.

WILLIAM S. COLE, M.D.
Member, Program Committee,
Annual Scientific Assembly

"Preventive Detention" for Recidivistic Offender?

The article by Dr. David A. Lanham, which appears elsewhere in this issue, directs attention to a gap in our penal processes. A crime is committed, the offender is brought before the court, found guilty and "responsible," and sentenced. The public, satisfied that "justice has been done," relaxes with confidence that the offender has been punished and that society is again safe. But is it?

Very few offenders are actually confined permanently. Many, of course, when paroled or released on expiration of sentence do not repeat their offenses, and indeed become useful citizens. Unfortunately, however, offenses do not go "by the book" but rather by the background and psychology of the offender. Yet because his term is up, or because by some mathematical quirk he has served a proportion of his sentence which "entitles" him to release, he is set loose upon the public even though the psychiatrists can predict easily an early continuation of his offenses, and even though the offender himself announces his intention of "getting even" with society.

The establishment of the Legal Psychiatric Service by the D. C. Health Department was a decided step forward in assuring a greater consideration of the personality factors in the disposition of the offender. We need to go further, however, either in establishing, as Dr. Lanham suggests, something like Maryland's Patuxent Institution, or in emulating the British method of "preventive detention," whereby convicted offenders may be kept after the expiration of sentence if found too dangerous for release.

W. O.

Clinical Center Study of Chronic Myelogenous Leukemia

THE COÖPERATION OF PHYSICIANS is requested in a study of chronic myelogenous leukemia being conducted by the Chemotherapy Service of the National Cancer Institute at the Clinical Center, National Institutes of Health, Bethesda, Md.

Referrals of patients with chronic myelogenous leukemia are needed. Particularly needed are those in the 20- to 40-year age group with high white blood cell counts and platelet counts for studies of newer chemotherapeutic agents and as a source of white cells and platelets for in vitro and in vivo study.

Physicians who wish to have their patients considered for the study may write or telephone Dr. Paul P. Carbone, Chemotherapy Service, Medicine Branch, National Cancer Institute, Bethesda 14, Md.; telephone 496-4251.

Proceedings of Special Business Meeting

Dr. J. Rogers Young, Vice President of the Medical Society of the District of Columbia, acted as Chairman of a special meeting of the Society, May 20, in the absence of Dr. Karl C. Corley, the Society's President; the meeting was called to order at 8:25 p.m.

The Chairman declared the meeting in executive session and appointed Dr. Maurice J. Kossow and Dr. Frederick Y. Donn as sergeants-at-arms.

The Chairman stated that the purpose of the meeting was to consider the recommendations of the Executive Board and House Committee relative to disposing of our present property and building a new single-purpose Society building on other property within a reasonable distance of the present site. In outlining the method of procedure for the evening, the Chairman said he would introduce several members of the Executive Board and the House Committee, who would make formal presentations, to be followed by a question-and-answer period and then discussion of the recommendations. Those introduced were Dr. W. LeRoy Dunn, Chairman of the Executive Board; Dr. Victor R. Alfaro, member of the Executive Board and Chairman of the House Committee; Dr. Arthur Morris and Dr. Frank S. Pellegrini, members of the House Committee; and Dr. Herbert P. Ramsey, to serve as parliamentarian for the session.

Presentation of Dr. Dunn

This is not an appropriate time to review the history of this Society nor of this building, but a few comments with regard to the latter would be in order.

For more than 40 years this building has served us and our predecessors well. We can thank a few dedicated physicians, led by Dr. Edward Y. Davidson, Chairman of the Building Committee from 1917 to 1921, for this building. Without their effort and dedication to the task this building would not exist as it is today. It was dedicated by Dr. William Gerry Morgan in January, 1921, and has been in use ever since that time.

In 1921 there were 561 members. In order to get the building project started the Society raised $63,000—$44,446 from members ($7,215 by assessment and $37,231 by voluntary contribution) and $18,554 from nonmembers of the Society. It would be interesting to know who these nonmembers were and why they contributed almost half as much as the members did. Whatever the answer, we as heirs have received a valuable legacy and should seek to leave a similar legacy to those who follow us.

The original cost of 1718 M Street was $125,000—$15,000 for land and $110,000 for building and furnishings. Since then, of course, the Society itself, the Woman's Auxiliary, and individual members have added to the furnishings and equipment.

For many years, the single auditorium was adequate for the regular weekly Society meetings. However, looking toward expansion and changes in program needs, the Society purchased 1710 M Street, N.W. in 1937 and remodeled it in 1958. The purchase price was $30,000, the remodeling, $95,000, making a total expenditure of $125,000.

The Society has a total investment in the 2 buildings, aside from newer furniture and fixtures, of $250,000, and a total ground space of 10,529 square feet.

At the time of remodeling 1710 M Street, it was believed the income from the 6 apartments and several offices would pay the expenses of maintenance, the cost of restoration, and also provide a fair return on the investment. This has not proved to be the case. Rental space has paid expenses but has not provided a fair return on the $125,000 investment.

Seventeen Ten M Street, as remodeled, was a necessary addition to house the expanding Medical Bureau, to provide office space for Medical Annals, the Membership Department, and to provide a meeting room for the Board and committees. It has not been painted since the remodeling 5 years ago, and will require a substantial outlay of funds soon. The small, nonair-conditioned, 1-room apartments will not remain attractive very long to acceptable tenants. The Medical Bureau, in which 29 women handle over 1,000,000 calls a year for its 750 members, is archaic and woefully inadequate.

On the other hand, 1718 M Street is a sound building and could be remodeled. Remodeling would require a substantial outlay of cash, which the Society does not have and therefore, would require an assessment on the membership. Further, it would not provide the parking facilities so badly needed now. Aside from this practical economic aspect of the problem and the increasing difficulty in finding parking space, our present building is not adequate to serve the needs of the Society, its committees, Sections or specialty societies.

Use of the Building

During the first 4 months of 1963 there were 141 meetings here. Over half of these were meetings related to groups or societies. Committees met 46 times—8 in the library, 38 in the B & C Rooms and in the Executive Offices. Sections used the building 24 times—the auditorium twice, the library 16 times, and the B & C rooms 6 times. Related groups met 71 times in the building—14 in the auditorium, 42 in the library, and 15 times in the B & C rooms.

Yet only 5 of the 12 Sections of this Society, replying to a letter from the House Committee, indicated they use the Society headquarters for meetings. The others meet elsewhere, and 2 of the 5 meet here only part of the time. The main reasons seem to be lack of facilities for dinners and parking.

It's well to have related groups meet here, but it would be better to have all Sections and most specialty societies look upon the Society building as their meeting headquarters.

In our survey of the Sections, 11 of the 12 replying indicated a preference for holding meetings here if we had facilities for dinner and had better parking arrangements. We believe, too, the specialty societies not now meeting here would consider doing so were adequate facilities available.

The old weekly meetings of the Society have been replaced by numerous smaller meetings of Sections, hospital staffs, and specialty groups. The Society should seek to be of service to more of its members by providing a place for them to meet and fraternize. Our present headquarters is not adequate for this purpose. We should have a new modern building designed to better serve the needs of our committees, Sections, and members of specialty societies. The current value of our property will make this possible without burdening the Society with debt.

Recommendations of the Board

In view of the foregoing, the Executive Board recommends to this Society—not as a mandate but to provide means of securing the best possible arrangement for a new, modern Society headquarters—that it [the Board] be given the authority to:

1. Negotiate the sale or lease of the present property at 1710–1718 M Street, N.W., and
2. Negotiate the purchase of another property, within a reasonable distance of and less expensive than the present site, for the purpose of constructing a single-purpose Medical Society building.

House Committee Proposals

At this time Dr. Dunn asked for the Chairman's permission to call on Dr. Alfaro to discuss what the Committee has in mind in regard to other property.

Dr. Alfaro, using 3 slides for visual presentation, reported on the potential value of the present property owned by the Society and discussed the various possibilities considered by the Committee. He reviewed the Committee's original concept that the Society should build an office building on the present site, and then discussed the arguments which finally led the Committee to reject this in favor of a single-purpose (for medical and related groups, not commercial purposes) Medical Society building elsewhere. He described the various areas considered by the Committee, pointing out the pros and cons of each and stating that the final choice will depend on what is received for this property and what will be required to purchase a sufficient amount of land to serve our purposes.

At the conclusion of his presentation, Dr. Alfaro asked the privilege of calling on Dr. Morris to review some of the needs of and proposals for a new building which had been considered by the Committee.

Dr. Morris, with the assistance of slides, presented an architect's conception of what the Committee thought should be included in a new building. He discussed size, cost, and the possibility and feasibility of providing parking space. All plans, he said, were considered with the viewpoint of making the Society a center for medical meetings and a place where physicians might more readily get together.

Following Dr. Morris' presentation, the Chairman opened the meeting for questions. The next half hour was taken up with questions from 15 physicians. The questions were referred to different members of the Board and House Committee to answer. At the end of the question period the Chairman reread the recommendations of the Executive Board and called for discussion on the motion. Following a brief discussion the motion to approve the Executive Board's recommendations was passed with but a few dissenting votes.

There being no further business, the Chairman adjourned the meeting.

Annual Report of President of Medical Service*

THIS IS MEDICAL SERVICE'S fifteenth anniversary. It is a pleasure for me to report that our youthful organization is healthy, and, I am pleased to say, making very satisfactory progress. At the same time I recognize much remains to be done to make our organization what it can and should be.

Years of Remarkable Growth

Medical Service began operation in 1948 with 112,000 participants. At the close of 1962 there were 893,679 individuals covered by its contracts. I think you will agree it is an understatement to say that this growth is phenomenal. Incidentally, participants in Blue Shield Plans nationwide at the end of the first 9 months of 1962 numbered more than 51,000,000, or in excess of 25 per cent of the population of this country.

This remarkable achievement would not have been possible had there not been many dedicated physicians willing to give unstintingly of their time to further the Blue Shield movement. To them—especially those who pioneered in the development of Medical Service of D. C.—we owe a deep debt of gratitude. I need hardly add that important as their contributions have been, Blue Shield Plans generally would have lost impetus without the support of the medical profession generally. I am especially proud of the support and loyalty given Medical Service by physicians in the Washington Metropolitan Area, many of whom serve on committees of Medical Service and devote countless hours to medical problems affecting our Plan. In particular, I want to take this opportunity to salute Dr. Brooks Brown, who is retiring as Chairman of the Committee on Physicians' Services after serving on the Committee for the past 5 years.

Administration

Just one more general observation. Medical Service, because of its phenomenal growth, has become a highly complex operation. Conducting its affairs requires top-flight administration. Any organization responsible for disbursement of nearly 20 million dollars a year is "big business." I want to emphasize, as I have on previous occasions, that under George McGovern's direction, the administration of Medical Service has been and is in very capable hands.

As you probably know, the Board of Trustees authorized the employment of an Assistant to the Executive Vice President, and Theodore Wiprud was employed as Special Assistant to Mr. McGovern, beginning last September 15, 1962. His services were felt to be urgently needed in connection with the Physicians' Relations Program, which, as most of you know, has been stepped up in the past several months.

It would be asking too much to expect that Medical Service be free of defects. As I pointed out in the beginning, it is still a comparatively youthful organization. The growth explosion, if I may call it that, has brought with it a number of operative problems. The remarkable thing to me is that there have not been more of them. If you are inclined, for one reason or another, to judge Medical Service harshly, I hope you won't overlook its outstanding accomplishments, of which I think we have every right to be proud.

Keeping Pace with Subscriber's Demands

Last year in my report to you I stated that we were endeavoring to keep pace with our subscribers' demands for improved and broader coverage. Since then demands for increased benefits have become more insistent. To meet them, the Board of Trustees is recommending to you tonight an increase in the scope of benefits for all subscribers. In addition it proposes an increase in income levels together with higher physicians' fees. Finally, there is the recommendation that laboratory and X-ray services be paid for in full by Medical Service regardless of income levels.

When Medical Service began operation in 1948 the program was limited to surgical care and delivery in a hospital, and laboratory, X-ray and anesthesia services directly related to such care. From such simple beginnings Medical Service has expanded the scope of services for which benefits are provided so that, in addition to the services for which benefits were provided originally, the Surgical-Medical Contract now provides surgical care outside the hospital, visits by a physician for nonsurgical care in a hospital, radiation therapy in or out of a hospital, and numerous diagnostic services in the doctor's office.

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* Presented at the Fifteenth Annual Meeting of Participating Physicians of Medical Service of the District of Columbia, May 8, 1963.

In 1948 the family income level established by Medical Service was $4,500 a year, an amount which exceeded the median income of families in the Washington Area, which was reported in the 1950 census to be $4,262 a year.

In 1952, in order to project income level increases into the future and accommodate increases which had occurred since the Plan began operation, the family income level was established at $5,500 a year. In 1956 the Surgical-Medical Contract was introduced, and the family income level was established at $6,000 a year, an amount that was calculated to approximate the median income of families in the Washington Area at that time.

The census for 1960 indicates that the median income of families in the Washington Area amounted to $7,577. Allowing for increases in family incomes since that time, the median family income in the Washington Area at this time is calculated to be in excess of $8,000 a year.

Proposed Increase in Fees

While the surgical schedule utilized by Medical Service when the program began operation was generally considered to provide payment at less than going charges in the community, surgical fees now are about 33 per cent greater than they were originally. During the same period surgeons' fees nationally have increased about the same amount. An increase of 12½ per cent in the surgical schedule of Medical Service at this time would appear to establish an overall increase in the original schedule of about 50 per cent.

While the segment of enrollment which would become elegible for service benefits would be limited to families with incomes between $6,000 and $8,000, the increased fees would apply to all subscribers.

As must be apparent to you, much thought and serious discussion have been devoted by the Board of Trustees to the proposals to increase income levels as well as fees. Involved in the study of them have been the Executive Committee of the Board of Trustees, the Board itself, and the Committee on Fees. Details with respect to the Board's views and recommendations are already in your hands. I hope there will be free discussion of the Board's proposals.

Well Earned Tribute

I want to say again what I said last year concerning the faithfulness and loyalty of what I then called the "long-suffering lay members of the Board who have endured an ear drubbing of medical terminology." Over the years the contributions of these outstanding leaders in the community have been of tremendous significance in the growth and development of Medical Service. I think that, too often, Participating Physicians have the feeling that the Board of Medical Service should be responsive only to the physicians who participate in the Plan. However, it must be kept in mind that Medical Service is supported by the public, that funds for payment of physicians' services come from the public, and that the expansion of benefits and increases in income levels and fees often result from demands made by individuals, unions, and groups of subscribers. Men like Phil Talbott, Doug Smith, Bob Holmes, and Charles Stott have helped the physician-members of the Board keep our goals in perspective, and they have counseled us wisely in areas of policy outside the field of medicine. Understandably, they become very weary at some of the Board's long meetings, but they hang on and give close attention to subjects under discussion, some of which are foreign to them.

It is only proper that I pay tribute to my fellow physicians on the Board. They devote countless hours to the problems of Medical Service and, as you know, receive no compensation. Their only satisfaction is in the knowledge of duty honestly and conscientiously performed.

Revised Program Deserves Priority

Finally, I want to reiterate that the most important matter before you tonight is broadening Medical Service's program. Expansion of benefits provided by Medical Service is in keeping with the needs of the public and the interests of physicians. As Medical Service has improved and added to its program in the past, so it is necessary to revise the program periodically in order to keep pace with progress and the economy of the community being served.

Henry L. Darner, M.D.
President

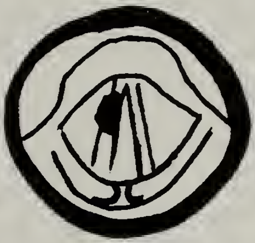
Cancer of the Larynx

SYMPTOMS: Hoarseness
Wheezing
Lump in throat
Dysphagia

REMEMBER: **Early Diagnosis** by complete examination results in an absolute increase in the percentage of cure.

THUS:

to see this



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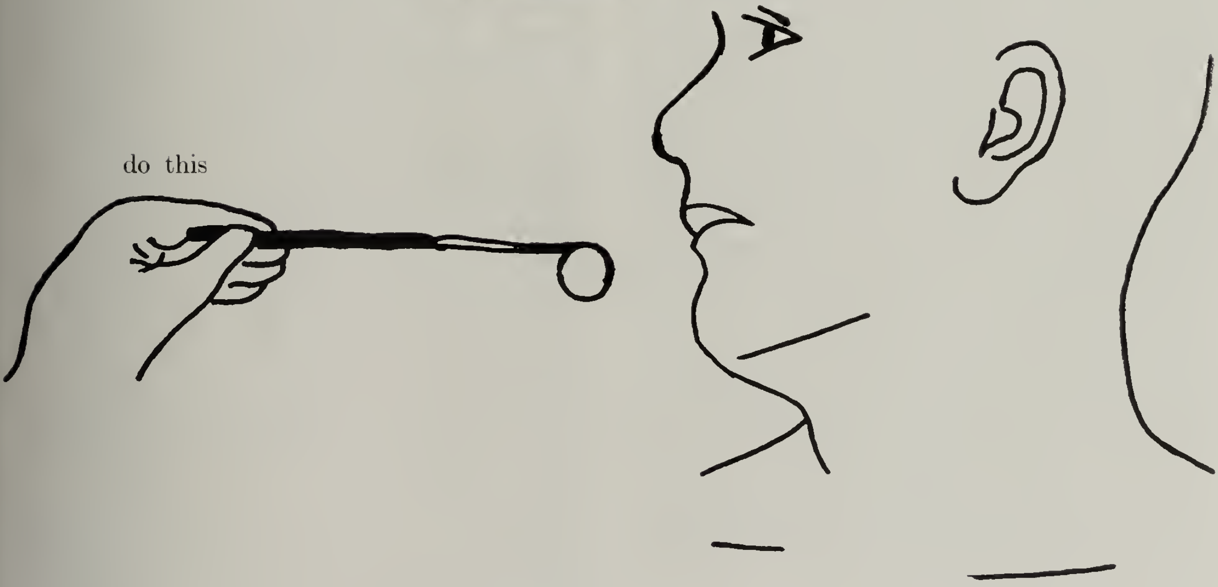

BECAUSE: **Indirect Laryngoscopy** with the mirror is the fundamental method of examining the larynx.

A new monograph, "Cancer of the Larynx" is now available.

Call or write for your copy:

American Cancer Society
D. C. Division, Inc.
810 18th Street, N.W.
Washington 6, D. C.
Executive 3-3690

Letters to the Editor

Elimination of the Menopause

A paper of mine entitled "The Roles of Estrogen and Progesterone in Breast and Genital Cancer," published in *The Journal of the American Medical Association*, continues to attract considerable attention (Wilson, R. A., 182: 327–331 [Oct. 27] 1962). Requests for reprints continue to arrive; many from abroad and from behind the Iron Curtain. This paper concludes: "The evidence presented indicates that estrogen and progesterone are prophylactic to breast and genital cancer to an unknown degree. It is urgent that this process be intensively investigated. It would seem advisable to keep women endocrine-rich (estrogen-progesterone) and consequently, cancer-poor throughout their lives. A consequence of this would be the elimination of the menopause." In 2,387 years of patient-exposure to exogenous estrogen, no breast or genital cancers occurred although 18 was the expected incidence.

A related article entitled "The Fate of the Nontreated Postmenopausal Women—A Plea for the Maintenance of Adequate Estrogen from Puberty to the Grave" by Wilson, R. A., and Wilson, T. A., appears in the April issue of *The Journal of the American Geriatrics Society*. In this article it is shown that the menopausal woman is not normal; she suffers from a deficiency disease with serious sequelae and, without exception, needs treatment.

A third and key paper by Wilson, R. A., Hagstrom, H. T., Brevetti, R. E., and Wilson, T. A., entitled "Specific Procedures for the Elimination of the Menopause" will appear with an accompanying editorial in the May–June issue of *The Western Journal of Surgery, Obstetrics and Gynecology*. If the suggested appropriate methods are employed, a woman approaching the climacteric will not experience it, and the postmenopausal woman will be restored quickly to the premenopausal state. The degree of femininity (estrogenicity) of any woman whether young, perimenopausal, or postmenopausal, can be easily determined by an analysis of the percentages of superficial, intermediate and parabasal cells in the Papanicolaou smear. This cytohormonal assay is the only practical guide in the management of the menopause.

Today the menopause is as obsolete as the bow and arrow. No woman need experience it or live with its cumulative effects. The reëducation of almost every man, woman and physician in the civilized world is needed.

I feel certain that you will find this effort toward the final emancipation of women of interest.

Very truly yours,
Robert A. Wilson, M.D.

90 Eighth Avenue
Brooklyn 15, N. Y.

Publications Needed for Tokyo Library

Our Faculty of Medicine of the University of Tokyo is the oldest medical school in this country, and we celebrated the one hundredth anniversary in May, 1958. Since the very beginning it has brought up thousands of competent doctors and has made a great contribution not only to the Japanese medicine, but also to the World's. Upon this anniversary, our Faculty of Medicine planned establishing a modern medical library which would truly serve both for research and education in this field, and the building was completed in November, 1961. We have been doing our very best in making this Library what it should be since its birth. However, the Japanese medical scholars' and practitioners' requirements and expectation is making this Library not confined to the users on the campus, but also available countrywide practically as a National Library of Medicine.

Furthermore, we have been receiving many requests for reference and photo-copying of medical literatures from many of the foreign countries. Recently I have found out the following of your publications is badly needed in our Library. If it is not too much burden for you, we should certainly appreciate receiving it, although we have not official research publications for exchange.

Medical Annals of the District of Columbia.

Hoping to hear from you soon, I remain

Very truly yours,
Prof. Takeo Urata
Librarian, Faculty of Medicine,
University of Tokyo, Hongo, Tokyo

Editor's Note: This request was granted. It is quite evident that other publications would be welcomed if there are members of the Society who would like to extend such subscriptions to this Library.

The Recidivistic Offender—A Problem for the District of Columbia*

DAVID A. LANHAM, M.D.

Chief, Legal Psychiatric Services Division, Bureau of Mental Health, District of Columbia Health Department

In recent months a great deal of public interest and attention has been focused on the Mallory and Durham decision in the District of Columbia. There are 2 schools of thought concerning these decisions, as, indeed, there are concerning most social issues. A liberal faction supports these decisions as right and proper and in the interest of social progress, protection of civil liberties, due process of law, etc. A conservative group tends to see these decisions as a way for criminals to flaunt the law, to escape punishment for their misdeeds, and as protecting the offender at the expense of the public.

Actually, I believe that a most important issue has gotten lost in the shuffle of argumentation between these 2 groups, and that is the nature of many of the offenders involved. It is a fact that a large proportion of serious crimes against both persons and property are committed by individuals with rather extensive criminal records, impulsive patterns of behavior, and a psychologic character structure of a type that makes their future behavior reasonably predictable. A great deal of publicity is given to the occasional offender who is released because of the Mallory decision or who gets in difficulty after a stay in a psychiatric hospital under the Durham decision. Remarkably little is made of the fact that extremely dangerous individuals, with long histories of assault, yoke robbery, and similar crimes are released into the community every day through mandatory expiration of their prison sentence. I am rather certain that the number of individuals released from mental hospitals annually who are dangerous to their fellow citizens is very small in comparison to those who are released from prison by expiration of sentence. In fact, a certain percentage of these latter offenders are parole or probation violators who have demonstrated their inability to utilize either of these potential modalities for rehabilitation and have been reincarcerated to serve out their full sentence.

In a number of instances, 2 of which I shall detail below, members of our staff at Legal Psychiatric Services have interviewed these individuals shortly prior to their release from prison, either at the prisoner's request or at the request of prison officials who recognized that the inmate in question was a disturbed, hostile individual who does not belong in society. However, in most instances the psychiatrist is powerless to do anything about what he recognizes as a very real danger to the community. A few of these individuals are overtly psychotic and can be committed to a mental hospital under the existing law. However, the vast majority, like most criminal offenders, fall into the category of character disorders.

On a number of such occasions I have heard offenders about to be released announce their intention to commit a crime or wreak vengeance on society for real or imagined injustices as soon as they are released. Not infrequently they are individuals who have spent practically their entire lives in welfare and later penal institutions, leaving such institutions only long enough to commit another crime, be apprehended, and be reincarcerated. Their threats are not idle chatter.

In addition, they are often extremely tense and disturbed and recognize themselves that they are in need of help. However, characteristically, they will not voluntarily commit themselves to a mental hospital and will fight commitment if it will carry them past their mandatory release date, even while privately acknowledging their need for help. Also, by and large, they will not show up for treatment as outpatients and almost immediately revert to antisocial behavior as soon as controls are removed. Since they make themselves such medicolegal "hot potatoes" under the existing statutes in the District of Columbia they are almost invariably released, only to be returned after a short interval and another criminal offense.

Two such cases from our files illustrate this problem:

Case 1. H. S. J. was examined by a member of our staff on October 17, 1961. He was at that time serving a sentence for unauthorized use of a motor vehicle. He had been in correctional institutions almost continually since the age of 11 for housebreaking, larceny, destruction of property, etc. He also has a history of several suicidal gestures or attempts while in the institutions. As might be expected, his family background was a deprived one with frequent beatings and enmity toward his father. He was referred for psychiatric evaluation shortly before his mandatory release after a 6-year sentence because of moodiness, inappropriate affect, and occasional aggressive behavior. He was thought to have benefited little if at all from his last 6 years in prison. In 1955 he had been found as of "sound mind" after 3 or 4 months of hospital observation.

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* Presented at the 26th Annual Meeting of the Medical Society of Saint Elizabeths Hospital in Washington, D. C., April 19, 1963.

In the interview he showed no abnormal content but was obviously an extremely immature, impulsive individual. He showed no motivation for treatment, and there was no real basis for civil commitment which would carry him beyond his mandatory release date.

A few months after his release, in a case that attracted much publicity, he stabbed a Congressman's aide while she prayed in church and was also involved in other sexual assaults on women.

Case 2. R. O. W. is a 32-year-old man with a long history of antisocial behavior dating back to adolescence. He had been resistive to all efforts toward rehabilitation, was known as a "bad actor," and at one time had been confined in the Maximum Security Institution at Leavenworth, Kansas because he could not adjust in the Federal prison system. He was seen by us on May 7, 1962 and was scheduled for release on May 18, 1962. He requested to see a psychiatrist himself, and said that he was extremely tense, choked up, and fearful of his hostile destructive impulses. He told of previous assaults on people and feared he might kill someone. However, when we finally got down to what could be done, he indicated that he would not volunteer to go to a psychiatric hospital and would fight commitment by all legal means. Consequently he was released with a small supply of tranquilizing medication and instructions about getting outpatient treatment. He did not keep the appointment. He was released on May 18, 1962 and was recommitted to the Jail on May 23, 1962 after being charged with a major crime. At this time he had a full-blown psychosis with delusions, hallucinations, etc., and was transferred to Saint Elizabeths Hospital.

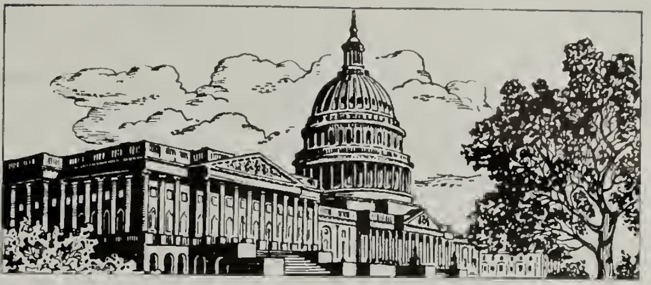
It seems to me somewhat reasonable that when there is a high degree of probability that a man about to be released from prison is extremely dangerous to his fellow citizens, as determined by those who have been responsible for his supervision, e.g., prison officials, psychiatrists and other physicians, psychologists, parole and probation officers, etc., his release should not be mandatory and automatic with the notion that he has "paid his debt to society." In fact, he may have a highly disturbed impulse-ridden character disorder or be an untreated or untreatable sociopath, a borderline psychotic person, or a mental defective with little or no impulse control.

Our neighboring state of Maryland has for several years at least attempted to cope with this problem through a so-called Defective Delinquent Statute,[1] with a special institution at Patuxent for at least a few of the hard-core recidivistic offenders who have established their inability to live in society and yet are not psychotic. They are remanded to this institution for an indefinite commitment with treatment only after a civil hearing and with proper legal safeguards, and their status is periodically reviewed. I suggest, in this brief report, that such a statute is needed in the District of Columbia, whether or not a special institution is built, although that would be desirable. I reiterate that I believe such a statute is really of more importance both to the community and the recidivistic offender than the controversy surrounding Durham and Mallory. If the offender involved is of the type mentioned above, he will be back in court and prison, no matter how many times he "gets off" under Mallory, and quite possibly if he is released from the hospital under Durham. For obvious reasons, I prefer the term "recidivistic offender" to "defective delinquent," and I think the final determination of who should be committed under such a statute should be made by a jury after expert testimony in an open hearing. Certainly, the proper legal safeguards could be recommended by members of the Bar, profiting from the experience of other locales, such as Maryland, where such a statute is in existence.

Acknowledgment: I am grateful to Mrs. Marjorie Henderson, M.S.W., Chief Social Worker, Legal Psychiatric Services, for her assistance in collecting some of the data used in this paper.

Reference

1. Annotated Code of the Public General Laws of Maryland (1939 edition). Defective Delinquent Statute, Article 31B.



NEWS & PERSONALS

Boards & Committees

The Executive Board of the Medical Society of the District of Columbia met in the Society's building, May 27, 1963, at 7:30 p.m. Dr. W. LeRoy Dunn, Chairman, presided. Present were Drs. Karl C. Corley, Victor R. Alfaro, J. Spencer Dryden, Raymond T. Holden, Duane C. Richtmeyer, J. Rogers Young, Edward W. Nicklas, Grace H. Guinn, and Mr. George W. Cooley, Secretary.

Items of Business

1. Approved a report of the Finance Committee on the Society's expected financial status as of June 30, 1963; on the successful reduction of printing costs for the ANNALS; on the reduced ANNALS' income from drug advertising due to the new F. D. A. regulations; and on the purchase of additional dictating equipment.

2. Reviewed the general meeting of the Society (May 20, 1963) and approved the expenditure of up to $1,000 by the House Committee for advice and appraisal in seeking a new building site.

3. Approved a report of the Secretary on the meetings of the following committees:

April 23 Grievance Committee
24 Committee on Medicolegal Activities
May 1 Journal Exchange Committee
2 Committee on Public Health
3 Review Board for Prepaid Medical Care Benefits
13 Executive Board and House Committee
14 Committee on Public Information and Education
15 Committee on Aging
20 Committee on Mental Health
21 Grievance Committee
23 Liaison Committee with the Clergy

4. Approved the following membership recommendations of the Board of Credentials:

Active Members

Guenter J. Augustin, Washington Hospital Center
John Vinton Clift, 1835 Eye Street, N.W.
Robert Jackson Wetmore, 927 18th Street, N.W.
Frederick Henry Wilhelm, Glenn Dale Hospital, Glenn Dale, Md.

Associate Members

George Phelan Blundell, 915 19th Street, N.W.
Archibald Sinson, 925 Ridge Road, Annandale, Va.

Transfers: *Associate to Active:* Nikolas A. Janovski; *Affiliate to Active:* James P. Hartley.

Resignation, *Associate:* Homer B. Matthews.

5. Conferred with Dr. Harold W. Krogh and Mr. Bradford Cole of the District Chapter of the American Cancer Society on the Board's previous action concerning the "Cancer Answers" service. Voted to reaffirm its previous action, authorizing the Chairman to so notify the Cancer Society.

6. Conferred with Dr. Calvin T. Klopp, Chairman of the Cancer Control Committee, on actions taken by this Committee. Approved the following resolution on cigarette smoking:

WHEREAS, The preponderence of the evidence indicates that cigarette smoking is implicated in the genesis of lung cancer and probably other diseases; and
WHEREAS, The District of Columbia Medical Society is concerned in all matters relating to the public health; *therefore be it*
RESOLVED, That the District of Columbia Medical Society go on record as advocating the voluntary giving up of cigarette smoking by those already habituated; *and be it further*
RESOLVED, That the District of Columbia Medical Society coöperate with the American Cancer Society, District of Columbia Division, in its educational program to influence young people not to start the habit of smoking cigarettes.

7. Conferred with Dr. Oscar B. Hunter and Dr. Paul B. Garcia, representing the Section on Pathology and Laboratory Medicine, on liability

problems related to transmission of certain infectious diseases via blood transfusions. Referred problem to Committee on Public Policy to prepare legislative proposal.

8. Discussed a report from the Review Board on a request from the Section on General Surgery and voted to reply to the Section outlining the authority and procedures now followed by the Review Board.

9. Approved the recommendations of the Cancer Morbidity Review Committee concerning a new site for the next study and authorized the President to make such changes in the Committee as are necessary.

10. Approved a recommendation of the Committee on Public Health to allocate up to $200 to send a representative to the ninth National Conference on Physicians and Schools in Chicago, October 11–12, 1963.

11. Approved the recommendations of the Committee on Public Information and Education for 3 awards: the John Benjamin Nichols Award, the Certificate of Meritorious Service, and the A. H. Robins Award for Community Service.

12. Approved a statement by the Committee on Poliomyelitis in regard to immunization (see editorial in this issue).

13. Reviewed the potential problems that may arise because of Blue Cross-Blue Shield use of group rating instead of community rating and voted to request an explanation of the differential in rates between the Medical Society group and certain other groups.

15. Discussed a proposal for a program entitled "Dial a Dietician" and voted to refer it to the Committee on Public Information and Education.

16. Approved a revision in classification of physicians under the Society's Professional Liability Program and a change in rates (some to be increased, others to be decreased) for members joining the Program in the future.

17. Approved a report of the Committee on Aging requesting authority to explore the possibilities of and feasibility of taking the initiative to develop an Information and Referral Service for the Aged. Also approved the Committee's endorsement in principle of "Administrative Guidelines for Personal Care in Homemaker Services."

18. Accepted, with commendation, a report on the Thirteenth Annual Meeting of S.A.M.A., submitted by Albert D. Clements of the Howard University Chapter.

19. Approved a new rate schedule for ANNALS' advertising, effective July 1, 1963.

20. Adjourned at 11:00 p.m.

General News

Dr. Henry L. Darner was reëlected **President of Medical Service of the District of Columbia** by its trustees, May 23, to serve in that capacity for another year. He has served as President of Medical Service since 1961. Other officers reëlected were: Mr. Robert M. Holmes, First Vice President; Dr. F. Preston Titus, Second Vice President; Mr. Douglas R. Smith, Treasurer; and Mr. George B. McGovern, Secretary. Mr. Theodore Wiprud, Special Assistant to the Executive Vice President, was elected Assistant Secretary, succeeding Dr. A. Claggett Gray.

Newly elected members of the Board of Trustees are Drs. Read N. Calvert, Alfred A. J. Den, Murray Grant, D. C. Director of Public Health, and Andrew P. Sackett, Deputy Chief, Community Health Services, Public Health Service. Trustees reëlected were Drs. Darner, Titus, and C. Willard Camalier, Jr.; also Messrs. Smith, Holmes, Charles K. Stott, and Philip M. Talbott.

Representing the D. C. Medical Society on the Board of Trustees are Drs. Camalier, Darner and Den, who will serve for 3 years. The other Board electees will serve a 1-year term.

The Annual Meeting of the District of Columbia Division of the American Cancer Society was held, May 23, at Sibley Memorial Hospital. Dr. Harold W. Krogh, dental surgeon, was reëlected President by the Board of Trustees for the coming year. The trustees also named 5 Vice Presidents. Among them were Dr. John Parks, Dean of George Washington University School of Medicine, and Dr. Paul B. Cornely, Head of the Department of Preventive Medicine and Public Health at Howard University College of Medicine. Mrs. Gwynne G. Duty was elected Secretary and Mr. Frederick P. H. Siddons was reëlected Treasurer.

Physicians elected to the Executive Committee by the trustees were Drs. Joseph Cosimano, Jr., Ernest A. Gould, William P. Herbst, Jr., C. Roger Kurtz, Robert S. Jason, Calvin T. Klopp, William T. Lady, Howard S. Madigan, Jack White, and Theodore Winship. Dr. Madigan was named the professional delegate from the Division to the national Board.

Mr. Wylie W. Barrow, Treasurer of the Washington Gas Light Company, received the St.

George Medal and a citation from Dr. Krogh for devoted service to cancer control for more than 15 years. He is a Past President of the Society and currently serves on the national Board of Directors as well as on the local Executive Committee.

Five former presidents were present to receive special awards in recognition of the "Year of the Volunteer." They were: Drs. Klopp, Herbst, Harry H. Kerr, Mr. Siddons and Mr. Barrow.

Six physicians were honored for having served as volunteer speakers for more than 25 community education programs, namely, Drs. Cosimano, Madigan, Frederick Y. Donn, William W. Funderburk, Frederick B. Hartsock, and Lois I. Platt.

Dr. Alejandro F. Castro and Dr. George W. Ware were among those elected for 3-year terms on the Board of Trustees. Dr. John C. Rose was appointed for a 1-year term on the Board. Among those reëlected for 3-year terms were Drs. Gould, Jason, and J. Keith Cromer.

The Annual Medical Staff Banquet of the Washington Hospital Center was held at the Center, April 25. Dr. Theodore J. Abernethy, President of the Medical Staff, presided. This annual event features the recognition of staff members and awards to winners in an essay contest for the resident staff.

Dr. Herbert H. Schoenfeld, Chairman of the Gold-headed Cane Committee, presented Gold-headed Canes this year to Dr. W. LeRoy Dunn and Dr. Aubrey D. Fischer.

Dr. Dunn, Senior Advisory in Internal Medicine and a member of the active staff, began his service at Garfield Memorial Hospital in 1938. "He has been among those noted particularly on the Joint Medical By-laws Committee," Dr. Schoenfeld said, "which did its principal work before the medical staff merged in this endeavor here at the Center." Dr. Dunn, who is Chairman of the Executive Board of the D. C. Medical Society, was President of the Society in 1959.

Dr. Fischer, a member of the consulting staff in otolaryngology, began his work at Episcopal Eye, Ear and Throat Hospital in 1929, and "his progressive teaching and dedication to medical staff organization have been outstanding."

Papers read during the scientific portion of the program were the prize-winning essays from the contest conducted for members of the resident staff. The following papers merited cash awards:

First Prize: "Chronic Open Angle Glaucoma Associated with Traumatic Dislocation of the Lens," Dr. Harold I. Rodman, third-year Resident in Ophthalmology

Second Prize: "Umbilical Vein Portography and the Effect of Surgical Pituitrin on Portal Pressure in Man," Dr. Richard E. Kessler, fourth-year Resident in Surgery

Third Prize: "Blow-out Fracture of the Orbital Floor," Dr. Jack Bowers, third-year Resident in Ophthalmology

Essays by the following residents received Honorable Mention: Dr. Joseph Solinas, Resident in Medicine; Dr. Joseph Khoury, Resident in Surgery; and Dr. Edward E. Gahres, Resident in Obstetrics and Gynecology.

The American Heart Association is now accepting **applications from research investigators** for support of studies to be conducted during the fiscal year beginning July 1, 1964. The deadline for submitting applications for Advanced Research Fellowships and Established Investigatorships is September 15, 1963. Applications in the Grants-in-aid category must be received by November 1, 1963.

Established Investigatorships are usually awarded for 5 years, subject to annual review, in amounts ranging from $8,500 to $12,000 yearly plus dependency allowances, to scientists of proven ability who have demonstrated the capability of conducting independent investigation.

Advanced Research Fellowships are awarded for 1- or 2-year periods to postdoctoral applicants with at least 1 year of full-time research training or experience at the time of application, but who have not yet clearly demonstrated the ability to carry out independent research. Stipends range from $6,500 to $8,600 annually, plus dependency allowances.

Grants-in-aid are made to experienced investigators to help underwrite the costs of investigative projects, such as equipment, technical assistance and supplies.

Further information and application forms for awards may be obtained from the Director for Research, American Heart Association, 44 East 23rd Street, New York 10, N. Y.

The District of Columbia Chapter of the American Academy of General Practice elected the following officers on May 28:

Dr. W. Robert Perkins, *President*; Dr. Russell M. Tilley, *Vice President*; Dr. Claudine M. Gay, *Secretary*; and Dr. Harry Sacks, *Treasurer*.

The Washington, D. C. Dermatological Society elected new officers on May 23. They are:

Dr. Peter N. Horvath, *President*; Dr. Wendell M. Willett, *Vice President*; and Dr. Crawford Brown, *Secretary-Treasurer*.

The Student American Medical Association elected the following officers at the final session of its House of Delegates during the 13th Annual Meeting in Chicago, May 5: Robert O. Voy (University of Oregon), President; Duke D. Fisher (Indiana University School of Medicine), Vice President; and John W. Packer (Bowman-Gray School of Medicine of Wake Forest College), Treasurer. Stanley L. Falor, a junior at George Washington University School of Medicine, was elected one of the 7 Regional Vice Presidents.

Major General Joseph H. McNinch, MC, USA (Ret.) assumed new duties as **Chief Medical Director of the Veterans Administration** on June 1. As successor to Dr. William S. Middleton, who retired recently, he will head the largest medical program in the United States, with 169 hospitals, nearly 100 outpatient clinics, and a Nationwide program of home-town medical care.

General McNinch, a native of Indiana, received his medical degree from the Ohio State University in 1930. He also holds the degree, Master of Public Health, from Johns Hopkins University. During a long professional career in the Army he has held a number of major medical assignments; the last before his retirement in 1962 was Chief Surgeon for the U. S. Army in Europe. Since then he has been Director of Research for the American Hospital Association.

Colonel Joe M. Blumberg, MC, USA, has been named **Director of the Armed Forces Institute of Pathology,** succeeding Colonel Frank M. Townsend. A graduate of Emory University School of Medicine, Class of 1933, Colonel Blumberg assumed his new duties on May 15.

Colonel Townsend has been assigned to the Brooks Air Force Base in Texas, where he will serve as Vice Commander of the Aerospace Medical Division. He has served as Consulting Editor to the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA since 1957, representing the Armed Forces Institute of Pathology.

Dr. Frank B. Rogers, Director of the National Library of Medicine, will retire from this post on August 31. He has accepted a new position, Professor of Medical Bibliography at the University of Colorado Medical Center.

Dr. Rogers, a native of Ohio and a graduate of Ohio State University School of Medicine, has directed the National Library of Medicine since 1949, when it was under the auspices of the Department of the Army. He holds a graduate degree in Library Science and is a former Colonel in the Medical Department of the United States Army. He is currently President of the Medical Library Association, and was Chairman of the Second International Congress on Medical Librarianship, which was held in Washington in June.

Mr. Robert B. Throckmorton, of Des Moines, Iowa, was named **General Counsel of the American Medical Association,** effective July 1. He succeeds Mr. C. Joseph Stetler, who resigned to become Executive Vice President and General Counsel of the Pharmaceutical Manufacturers Association in Washington, D. C.

Mr. Throckmorton, member of a Des Moines law firm, has been counsel for the Iowa Medical Society since 1955. He received his law degree from Drake Law School in 1938, and a Master's degree in law from Harvard Law School in 1939.

Dr. Joel Elkes, Chief of the Clinical Neuropharmacology Research Center of the National Institute of Mental Health, has resigned this position **to become Professor and Director of the Department of Psychiatry of Johns Hopkins University School of Medicine** and Psychiatrist-in-chief of Johns Hopkins Hospital in Baltimore. Dr. Elkes has also served as Director of the Behavioral and Clinical Studies Center of St. Elizabeths Hospital and as Clinical Professor of Psychiatry at George Washington University School of Medicine.

Dr. Robert H. Felix, Director of the National Institute of Mental Health since 1949, has been **awarded the annual Edward A. Streeker Medal** for his outstanding contributions in the field of community mental health services. The presentation was made in Philadelphia at the 11th Annual Meeting of Horizon House, a non-profit organization that provides services to help former psychiatric patients readjust to community life.

Personals

Dr. C. Willard Camalier, Sr., Assistant Secretary of the American Dental Association and Director of its Washington office, retired, June 30, after more than a half century of service to the profession.

Dr. Camalier, who graduated from George Washington University School of Dentistry in 1912, has distinguished himself in both the practice of dental surgery and as a leader of organizational activities. In World War II he was Chairman of the ADA War Service Committee and was cited by the President of the United States for his services on the National Board of Procurement and Assignment. He has served as Chairman of the Advisory Committee to the Selective Service and is a member of the President's Council on Youth Fitness.

Dr. Camalier was President of the National Association in 1937–38. He is also Past President of the American Association of Dental Examiners. In 1950 the D. C. Dental Society cited him as the "outstanding dentist of the past 50 years." He has also received special recognition from the American College of Dentists and the Georgetown University School of Dentistry. He has been an Associate member of the D. C. Medical Society since 1932.

His son, Dr. C. Willard Camalier, Jr., a practicing surgeon, is an Active member of the D. C. Medical Society, serving presently as its Junior Delegate to the American Medical Association.

Dr. Robert E. Stowell, Scientific Director of the Armed Forces Institute of Pathology, has received a renewal grant from the American Cancer Society for continued studies of minute changes in liver cells when they are treated with cancer-causing dyes. The grant, in the amount of $29,431, is effective from July 1, 1963 through June 30, 1964.

Dr. William B. Looney, Assistant Professor of Radiobiology and Biophysics at the University of Virginia, is also the recipient of a $23,316 research grant from the American Cancer Society. The funds will be used in a study of "The Genetic Effects of Radiation at the Molecular and Morphological Levels in Intact Animals." The grant is effective from July 1, 1963 through February, 1965. Dr. Looney is an Associate member of the D. C. Medical Society.

Dr. Alan R. Crain returned to Washington in May after serving for 4 weeks as a volunteer with MEDICO in Viet-Nam. As a member of the Orthopedics Overseas Division of MEDICO, he assisted in the training of two Vietnamese physicians in American techniques of orthopedic surgery at Cho Ray Hospital in Saigon.

Dr. Ludwig G. Lederer, Medical Director of American Airlines, has been presented the Aerospace Medical Association's Howard K. Edwards Award for outstanding service in the practice of aviation medicine. The Award was made at the Association's 34th Annual Scientific Meeting in Los Angeles, April 29–May 2.

Dr. Lederer is Past President of the Association and the Airlines Medical Directors' Association, Chairman of the Medical Committee of the Air Transport Association, and a member of the medical advisory panel to the Federal Aviation Agency.

Dr. William J. Kennard, Executive Vice President of the Aerospace Medical Association, was reëlected Secretary-Treasurer at the same meeting.

The Alger B. Doland Memorial Trophy has been established by member clubs and individual members of the Chesapeake Bay Yacht Racing Association. Dr. Alger B. Doland, who died, January 23, 1963, was President of the Association at the time of his death. His successor, Mr. Stuart H. Walker, states that Dr. Doland was "always deeply interested in Junior sailing on the Bay." The trophy will be an annual award to the Junior sailing champion of Chesapeake Bay. Contributions marked "Doland Trophy Fund" may be sent to CBYRA Treasurer, Mr. Henry A. Wise, Jr., Bank of Delaware Building, Wilmington 1, Del.

Dr. Anson R. Hyde, President of the Northern Virginia Doctors Hospital in Arlington, Va. participated in groundbreaking ceremonies for the Hospital's new wing, April 24.

Dr. C. Barrie Cook, an Associate member of the D. C. Medical Society, heads the new public information program of the Fairfax County (Va.) Tuberculosis Association.

Dr. Sidney L. Werkman has been reëlected for a second term on the Board of Directors of the District Association for Mental Health. Mr. Colman B. Stein was reëlected President.

Alumni Day Awards at GW

Ninety-one senior medical students, the Class of 1963, were guests of the George Washington University Alumni Association at a dinner, June 1, which also marked the close of its Medical Alumni Day. Dr. Howard E. Ticktin, President of the Association, presided at the dinner and welcomed the Class into Alumni membership. Dr. O. S. Colclough, Dean of Faculties, extended greetings from the University on behalf of President Carroll.

Dr. John Parks, Dean of the School of Medicine, in his State of the School Message, paid special tribute to Dr. Thomas M. Peery, Chairman of the Committee on Educational Policy, for launching the Medical School's new educational program last September and for developing the Institute on Teaching Techniques, held in April, which attracted more than 400 medical educators and administrators from all sections of the country.

Two awards for outstanding achievement were presented by the Chairman. One of these went to Dr. Peery, who is also Professor of Pathology, "in recognition of his distinguished service and outstanding contributions to the field of medicine." Dr. Warren E. C. Wacker, Assistant Professor of Medicine at Harvard University, received the second Award of Merit. Dr. Wacker, an alumnus of George Washington, is also Senior Associate in Medicine at the Peter Bent Brigham Hospital in Boston.

Four physicians were presented University Chairs, each inscribed with his name and decorated with the University seal. Dr. Parks called to the platform for recognition Drs. Harry Ford Anderson, Ronald A. Cox, William H. Jenkins, and Daniel L. Moffett.

Dr. Anderson has served on the University staff for 36 years and as Chairman of the Department of Dermatology and Syphilology since 1940. Dr. Cox, a George Washington alumnus, was recognized for 28 years' service on the faculty and more recently as Chairman of the Department of Ophthalmology. Dr. Jenkins and Dr. Moffett, both graduates of the University of Maryland, have served as teachers of otolaryngology, Dr. Jenkins from 1921 to 1956 and Dr. Moffett from 1925 to 1955. Both have Emeritus status as Professors of Otolaryngology.

Mr. John Brown, Vice President of the University for Resources and Development, was the principal speaker. In his address, "The University and the Sheepskin Curtain," he stressed the necessity of graduates, both new and old, to extend their knowledge beyond the "sheepskin" in both professional and nonprofessional fields in order to assume their rightful positions as leaders in all aspects of political and social life.

AWARD OF MERIT TO DR. PEERY: Dr. Thomas M. Peery (left) has just received from Dr. Howard E. Ticktin, President of the George Washington University Medical Alumni Association, one of the 2 Awards of Merit presented, June 1, by the Association in recognition of distinguished service to the University.

The Class of 1953 was recognized for largest attendance at the banquet. Among individuals Dr. Ticktin recognized in the audience were the family team of Dr. Herman S. Hoffman and Dr. Katherine G. Symmonds, whose son, Charles J. Hoffman, was a member of the graduating class. He also recognized the father-son graduates, Dr. John Purpura, of Brooklyn, N. Y., and Anthony Purpura, a 1963 graduate.

Obituaries

Leslie Melrose Jones, M.D.

(1890–1963)

Dr. Leslie M. Jones, Chief of Anesthesiology at the Veterans Administration (Mt. Alto) Hospital, died March 2, 1963. His home was at 4518 Dorset Avenue, Chevy Chase, Md.

Dr. Jones, a Canadian, was born in Melrose, Ontario, February 8, 1890. His parents were Peter W. and Elizabeth S. Jones. He attended elementary schools in London, Ontario, and received his medical degree from the University of Western Ontario in 1917. He interned for a year at Victoria Hospital, also in London.

He practiced in London, Ontario, from 1920 to 1925, and was Assistant Director of the Harper Hospital, in Detroit, from 1925 to 1930. He was Superintendent of the W. A. Foote Memorial Hospital, Jackson, Michigan, 1930 to 1934, and for the next 2 years was Superintendent of the Epworth Hospital in South Bend, Indiana. After postgraduate training in anesthesiology at the McKesson Clinic in Toledo, Ohio, in 1936, he became anesthesiologist to the St. Joseph's and General Hospitals in Hamilton, continuing there from 1937 to 1943.

During World War II he served for 3 years, 1943 to 1946, with the Medical Corps of the U. S. Army, and held the rank of Major. During 2 of these years he was on overseas duty.

After the War he came to Washington to serve as Chief Anesthesiologist at the Veterans Administration Hospital.

Dr. Jones was a Fellow of the American College of Anesthesiologists, a diplomate of the American Board of Anesthesiology, a member of the American Society of Anesthesiologists and International Anesthesia Research Society, and an Associate member of the Medical Society of the District of Columbia. Dr. Jones was elected to Active membership in the latter in 1947 but transferred to Associate in 1950. He was a Rotarian, and for many years had devoted his extra time to Boy Scout activities.

Surviving him are his wife, Mrs. Ada Kreuger Jones, and a son and a daughter.

Thomas E. Griffin, M.D.

(1912–1963)

Dr. Thomas E. Griffin, Chief of the Legal Psychiatric Services of the D.C. Department of Public Health, died, April 16, 1963, at George Washington University Hospital.

A native of Buffalo, N. Y., Dr. Griffin was born, September 22, 1912, to Thomas E. and Inez Goodrich Griffin. His mother survives him. After attending public schools in Buffalo, he enrolled at Princeton University. After 2 years' study he transferred to the University of Buffalo, and received his medical degree from the latter in 1940. He interned at Deaconess Hospital, Buffalo, before entering general practice in the same city, and he served as a physician for the New York State Education Department.

He enlisted for military service during World War II and served in the Medical Corps, with the commission of Captain, from 1942 to 1946. He was on duty with the 7th Army Field Hospital in France and Germany.

After the War Dr. Griffin came to Washington and served a residency in psychiatry at St. Elizabeths Hospital from 1948 to 1950. He joined the District Department of Public Health as staff psychiatrist in the Mental Health and Alcoholic Rehabilitation Divisions. He was selected to head the Legal Psychiatric Division when it was established by the Act of Congress in 1954. In December, 1959 he retired because of illness, but continued to work with the Division as a consultant.

Dr. Griffin also maintained a private practice in psychoanalysis and was on the staffs of George Washington University and Doctors Hospitals, and the Washington Hospital Center.

He was a member of the American Psychiatric Association, the American Medical Association, the Washington Psychiatric Society, and the Medical Society of St. Elizabeths Hospital. He had been an Active member of the D. C. Medical Society since 1951. He also participated in the activities of the Washington School of Psychiatry and the Washington Psychoanalytic Society.

He is survived, in addition to his mother, by his wife, Mrs. Ann Kundrat Griffin, who resides at 2936 Brandywine Street, N.W., and a daughter, Mrs. Robert Allemeier, of Olean, N. Y. He also leaves a sister, Miss Jane Griffin.

James Patrick Kane, B.Sc., M.D.

(1909–1963)

Dr. James P. Kane, obstetrician and gynecologist, who had practiced in the Washington area since 1936, died, May 31, 1963 at the Washington Sanitarium and Hospital. His offices were located at 230 University Boulevard East, Silver Spring, Md.

Dr. Kane, a Washingtonian, was born May 4, 1909, and attended St. Peter's School and Gonzaga High School. He enrolled for premedical and medical training at Georgetown University, receiving his Bachelor of Science degree in 1931 and his medical degree in 1933. He interned at Gallinger (now D. C. General) Hospital for a year, and secured his resident training in obstetrics and gynecology at Columbia Hospital for Women.

Dr. Kane was elected to Active membership in the Medical Society of the District of Columbia in 1938. He was an "Oldtimer" member of the Georgetown Clinical Society and a member of the American Medical Association, the George Martin Kober Medical Society, and the Georgetown Medical Alumni Association. He also belonged to the Georgetown University Club of Washington and the Columbia Country Club.

Surviving him are his wife, Mrs. Ruth M. Kane, of 4510 Westbrook Lane, Kensington, Md., and 3 sons living at home, James P., Jr., David and Gerald. A daughter, Mrs. Kathleen Hollingsworth, lives in Hollywood, Calif. He also leaves 2 brothers and 3 sisters: John M. Kane, of Washington; Thomas J. Kane, of Baltimore; and Miss Margaret Kane, Mrs. James C. Connor and Mrs. Ellen C. Donahay, all of Washington.

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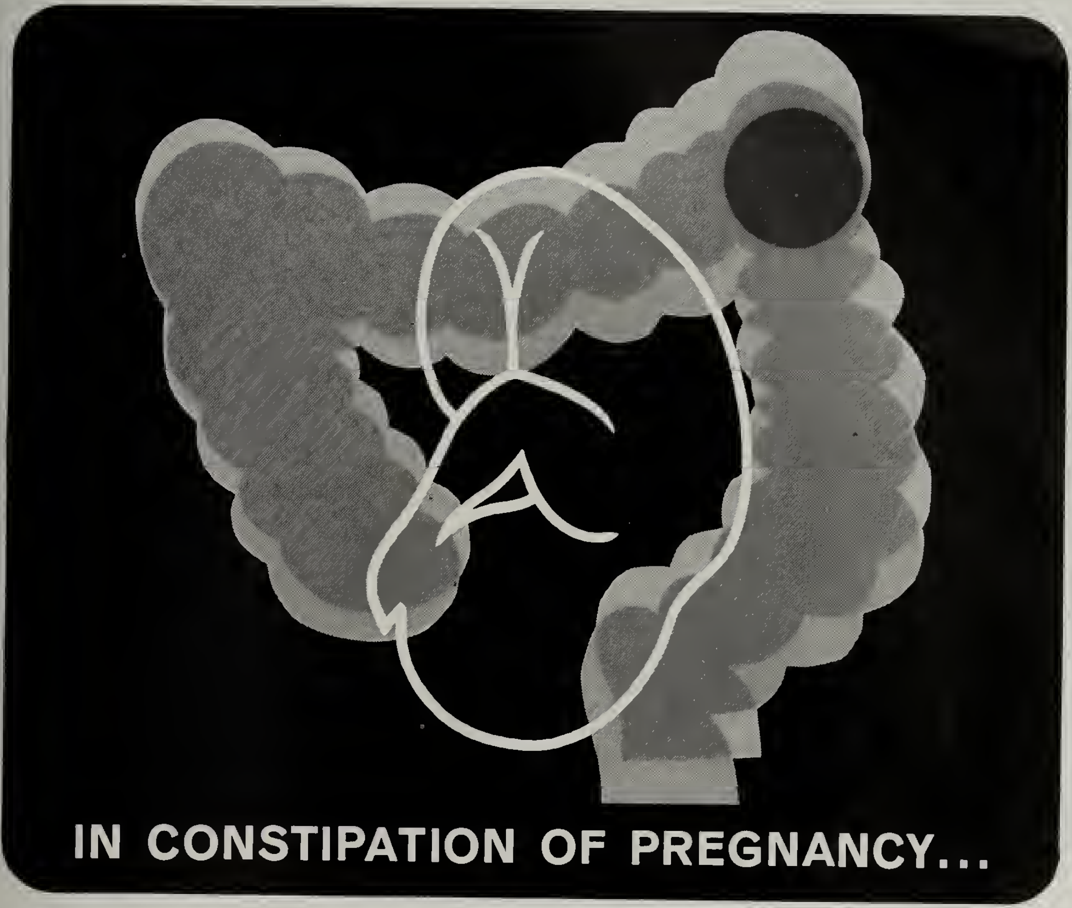
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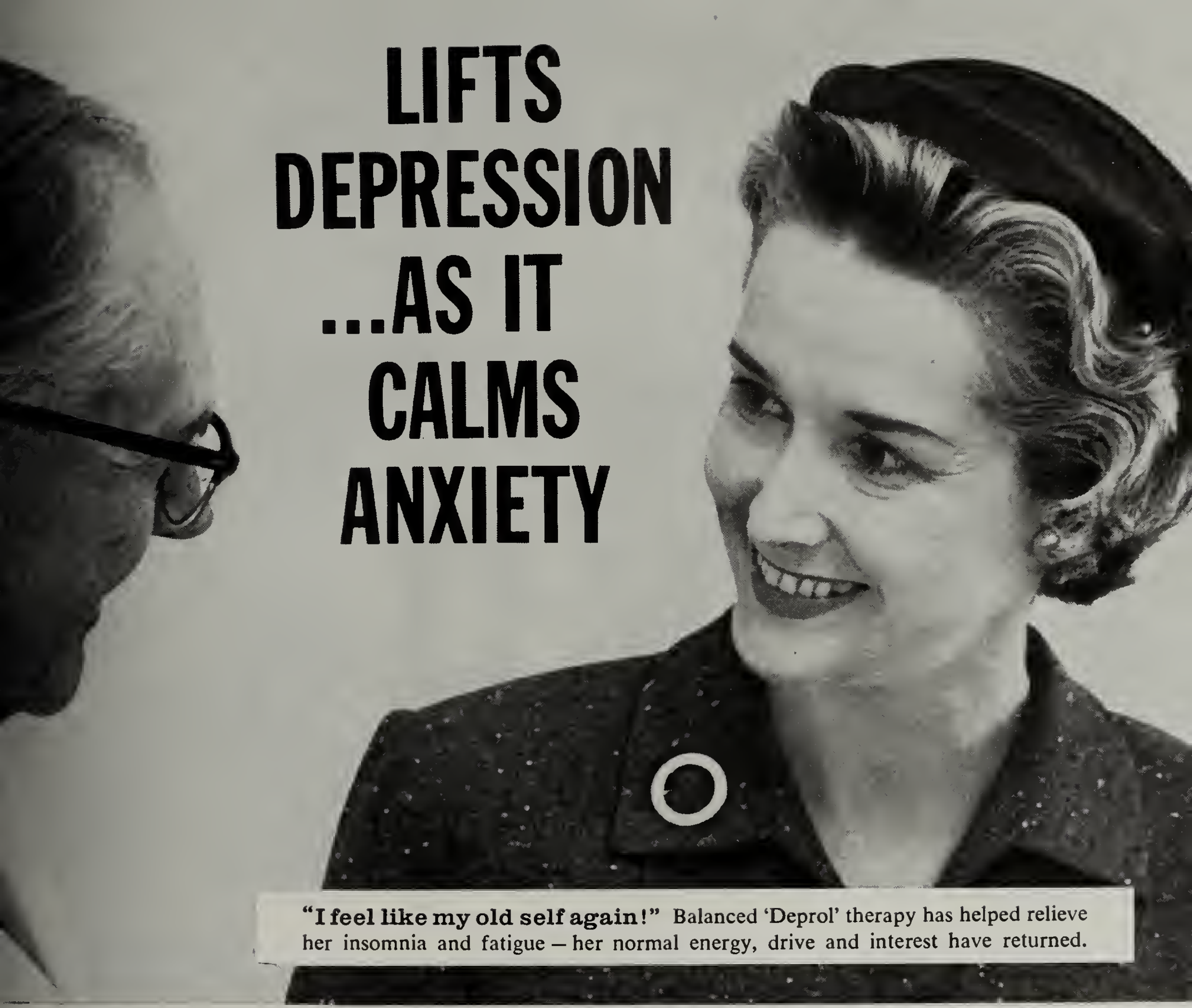

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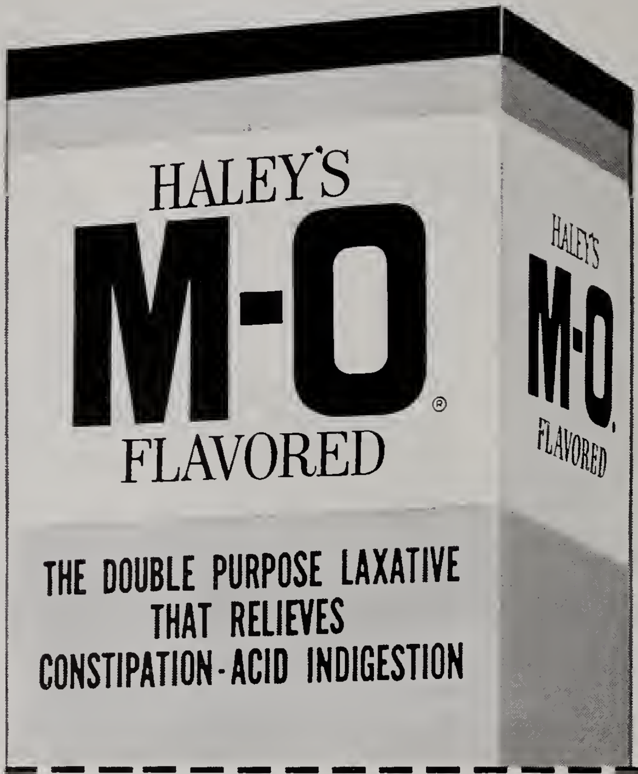
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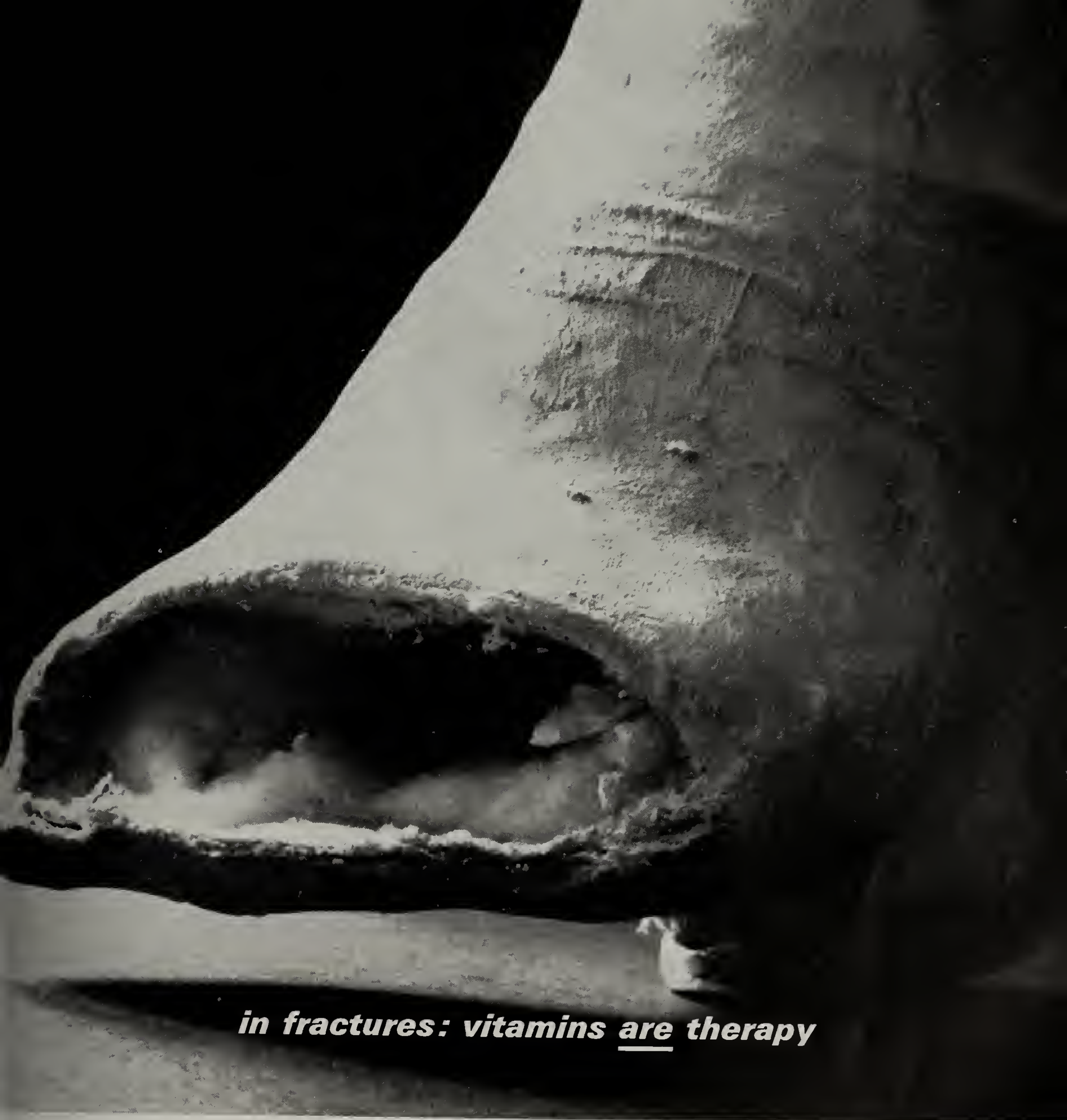

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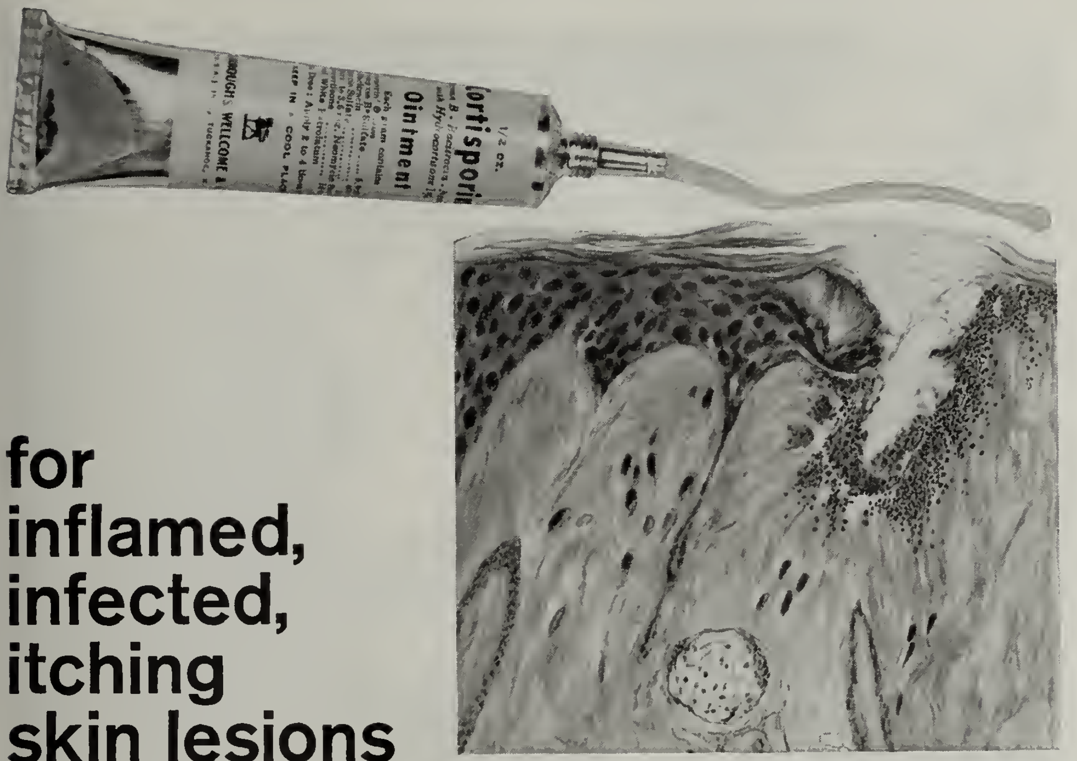

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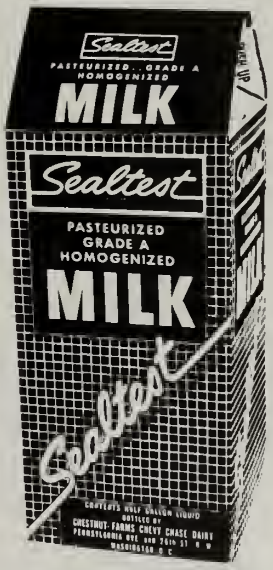

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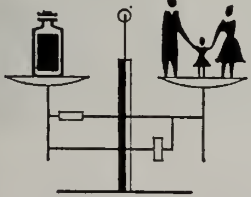

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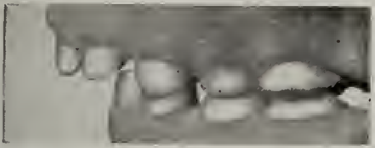

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October 7–10: 13th Annual Instrument Symposium and Research Equipment Exhibit. National Institutes of Health, Bethesda, Md. Address: Mr. James B. Davis, Executive Secretary, National Institutes of Health, Bethesda 14, Md.

October 13–18: Third International Congress of Plastic Surgery. Sheraton-Park Hotel, Washington. Address: Dr. Leslie H. Backus, Secretary-General, 217 Linwood Avenue, Buffalo 9, N. Y.

October 13–19: XVIIth World Medical Assembly. Commodore Hotel, New York. Address: Dr. Harry S. Gear, *Secretary-General*, World Medical Association, 10 Columbus Circle, New York 19, N. Y.

October 20–23: American College of Gastroenterology. Shoreham Hotel, Washington. Address: Mr. Daniel Weiss, Executive Director, 33 West 60th Street, New York 23, N. Y.

October 21–22: 1963 Scientific Session: Conference on Unusual Forms and Aspects of Cancer in Man. Biltmore Hotel, New York. Address: Dr. Roald N. Grant, Director, Professional Education, American Cancer Society, Inc., 521 West 57th Street, New York 19, N. Y.

October 25–26: Second National Congress on Medical Quackery. Sheraton-Park Hotel, Washington. Address: Dr. F. J. L. Blasingame, Executive Vice President, American Medical Association, 535 North Dearborn Street, Chicago 10, Ill.

November 4–6: Association of Military Surgeons of the United States. Statler-Hilton Hotel, Washington. Address: Brig. Gen. Frank E. Wilson, Executive Director, 1500 Massachusetts Ave., N.W., Washington 5, D.C.

November 18–20: Annual Scientific Assembly, The Medical Society of the District of Columbia. Statler-Hilton Hotel, Washington. Mr. George W. Cooley, Executive Director, 1718 M Street, N.W., Washington 36, D. C.

November 18–21: 57th Annual Meeting of Southern Medical Association. New Orleans, La. Address: Mr. Robert F. Butts, *Executive Director*, 2601 Highland Avenue, Birmingham 5, Ala.

November 18–23: National Association for Mental Health. Sheraton-Park Hotel, Washington. Address: Mr. Philip E. Ryan, Executive Director, 10 Columbus Circle, New York 19, N.Y.

December 8–11: American Society of Hematology. Statler-Hilton Hotel, Washington. Address: Dr. Charles Rath, Treasurer, Georgetown University Hospital, Washington 7, D.C.

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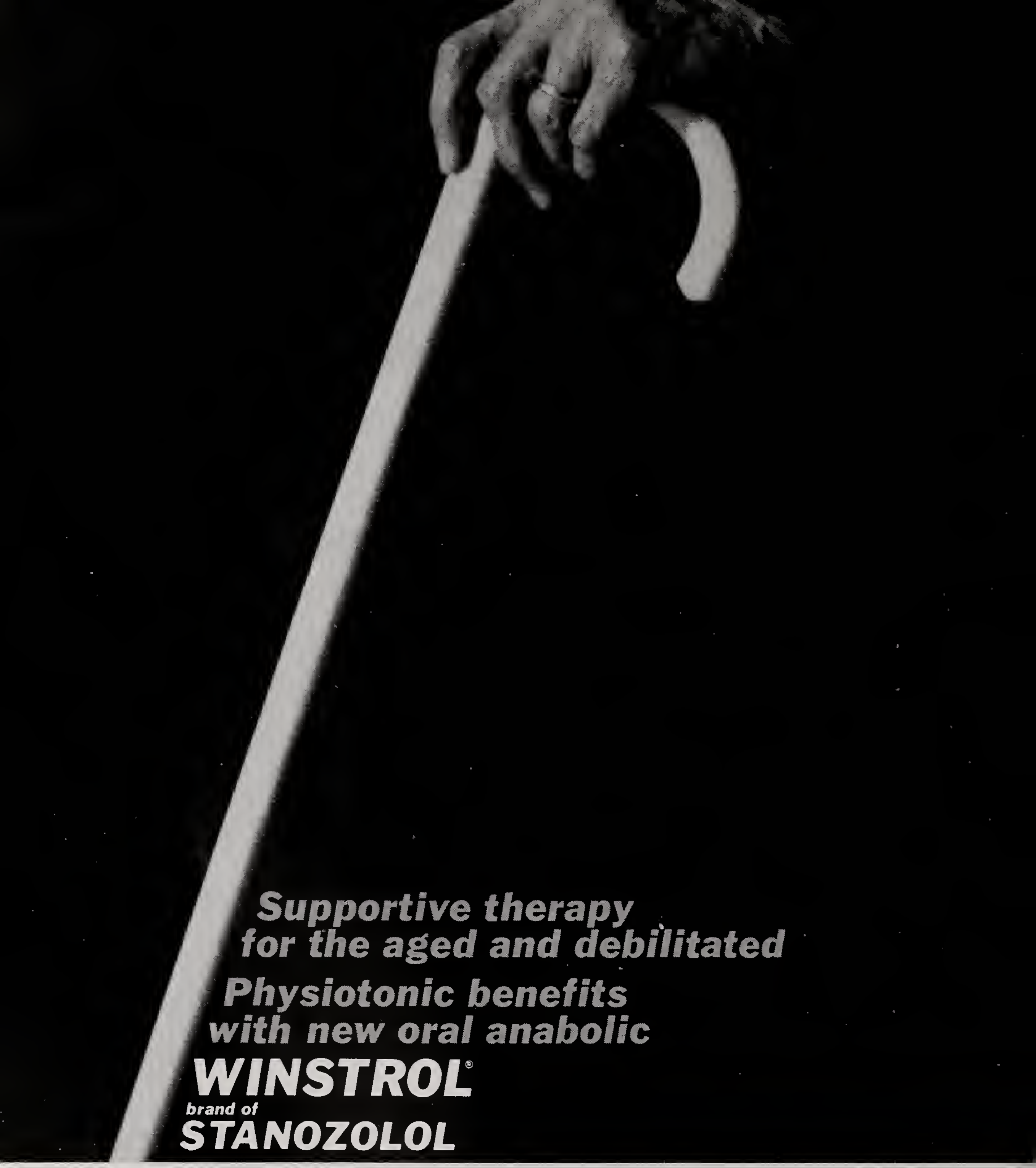

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have been reported in some patients – particul
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ment, stimulation, elevation of affect and acute ra
been reported in psychiatric patients; these reacti
be secondary to relief of anxiety and should be
for in the early stages of therapy. Other side effe
ally dose-related, have included isolated insta
minor skin rashes, minor menstrual irregularities,
constipation, increased and decreased libido. *P*
– Following parenteral administration some pati
become drowsy or unsteady. The injectable f
occasionally produced mild, transitory fluctua
blood pressure. ☐ **Precautions:** *Oral* – In elderly
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servation, preferably in bed, for up to three hours
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vehicle following injection. Reduce dosage when
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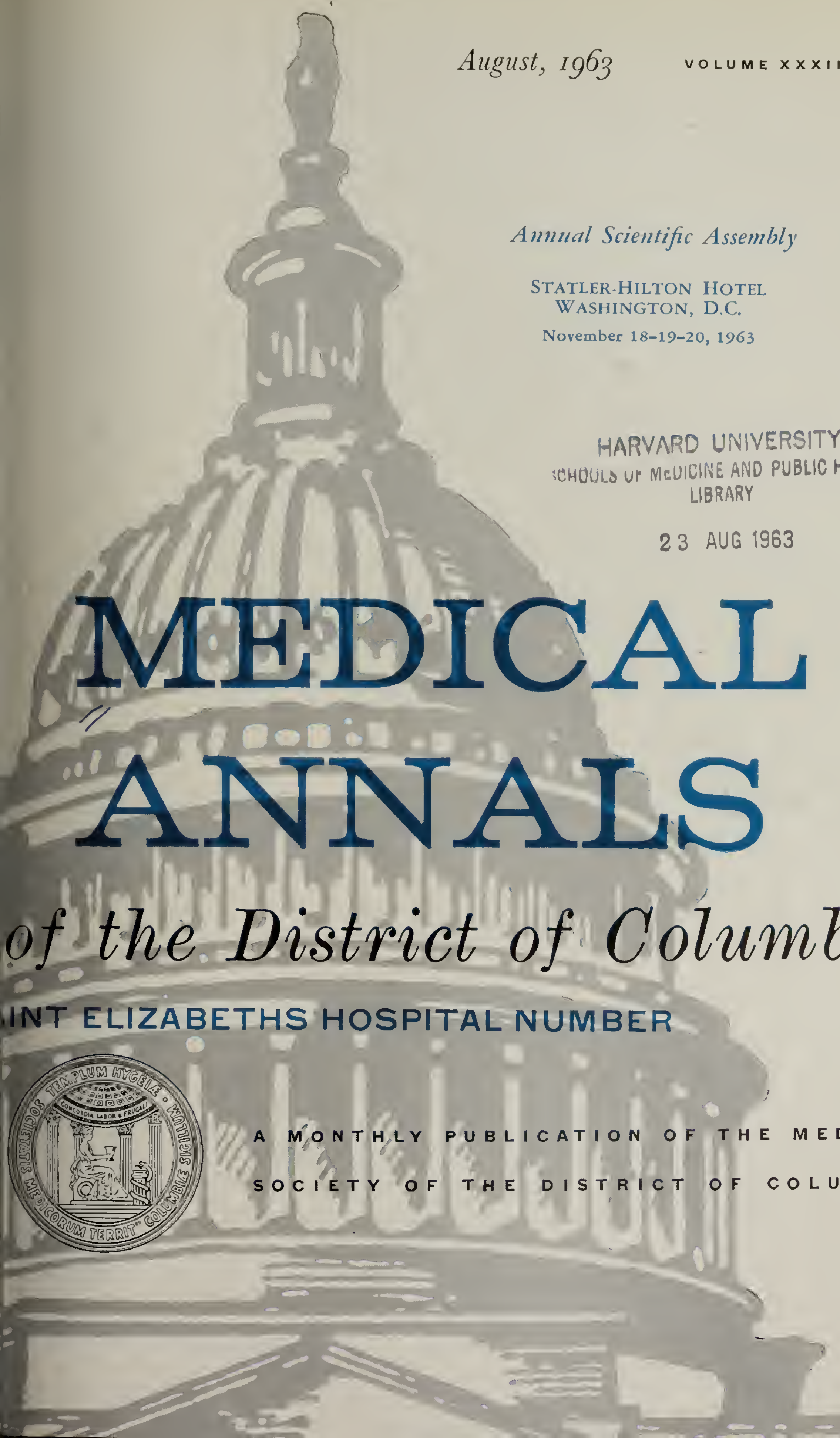

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1. Ford, R. A., and Blanchard, K. P.: J.-Lancet 78:185, 1958.

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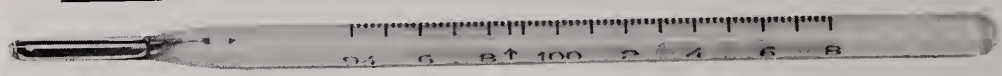

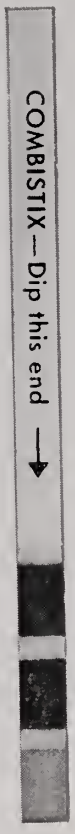

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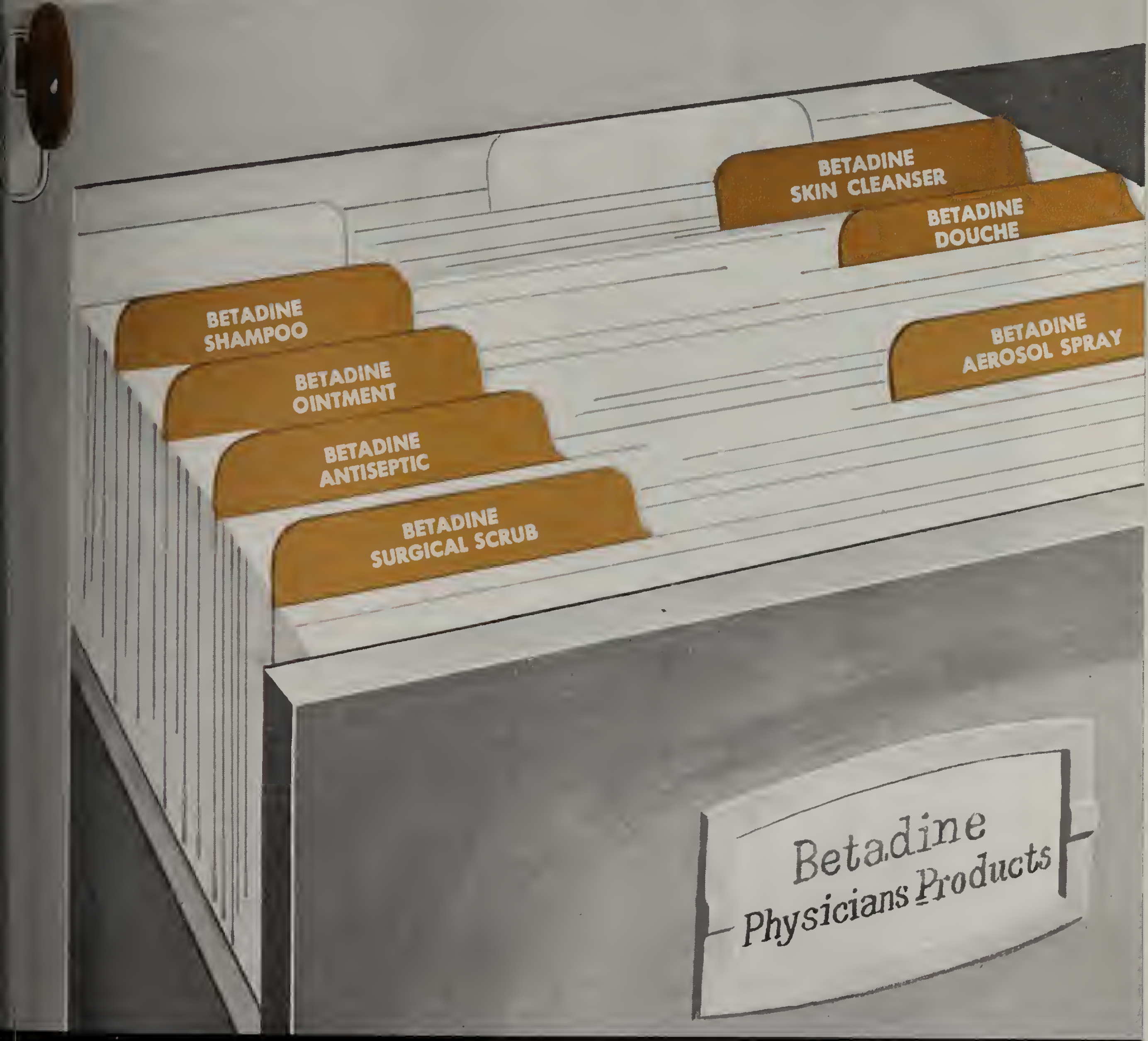
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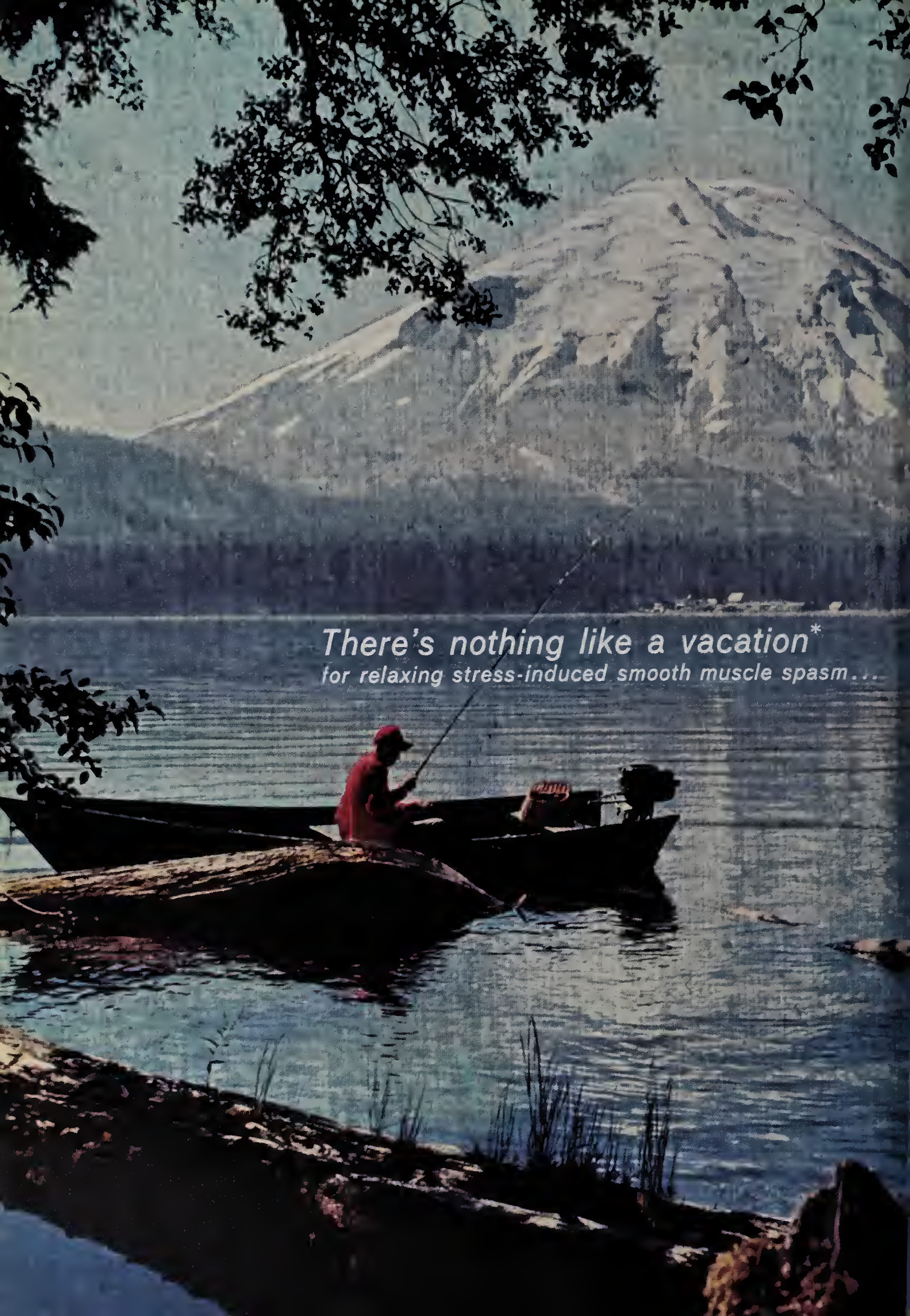
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REFERENCES: **1.** Barden, F.W., Hill, P.S., Mahaney, W.F., and Cuneo, K.J.: J. Maine M.A. 45:11, 1954. **2.** Chaput, Y., and Baillargeon, J.: L'Union med. du Can. 86:205, 1957. **3.** Hock, C.W.: Clin. Med. 8:1932, 1961. **4.** Kilstein, R.I.: Rev. Gastroenterol. 14:171, 1947. **5.** Marks, L.: Am. J. Gastroenterol. 27:180, 1957. **6.** Wharton, G.K., Balfour, D.C., Jr., and Osmon, K.L.: Postgrad. Med. 21:406, 1957.

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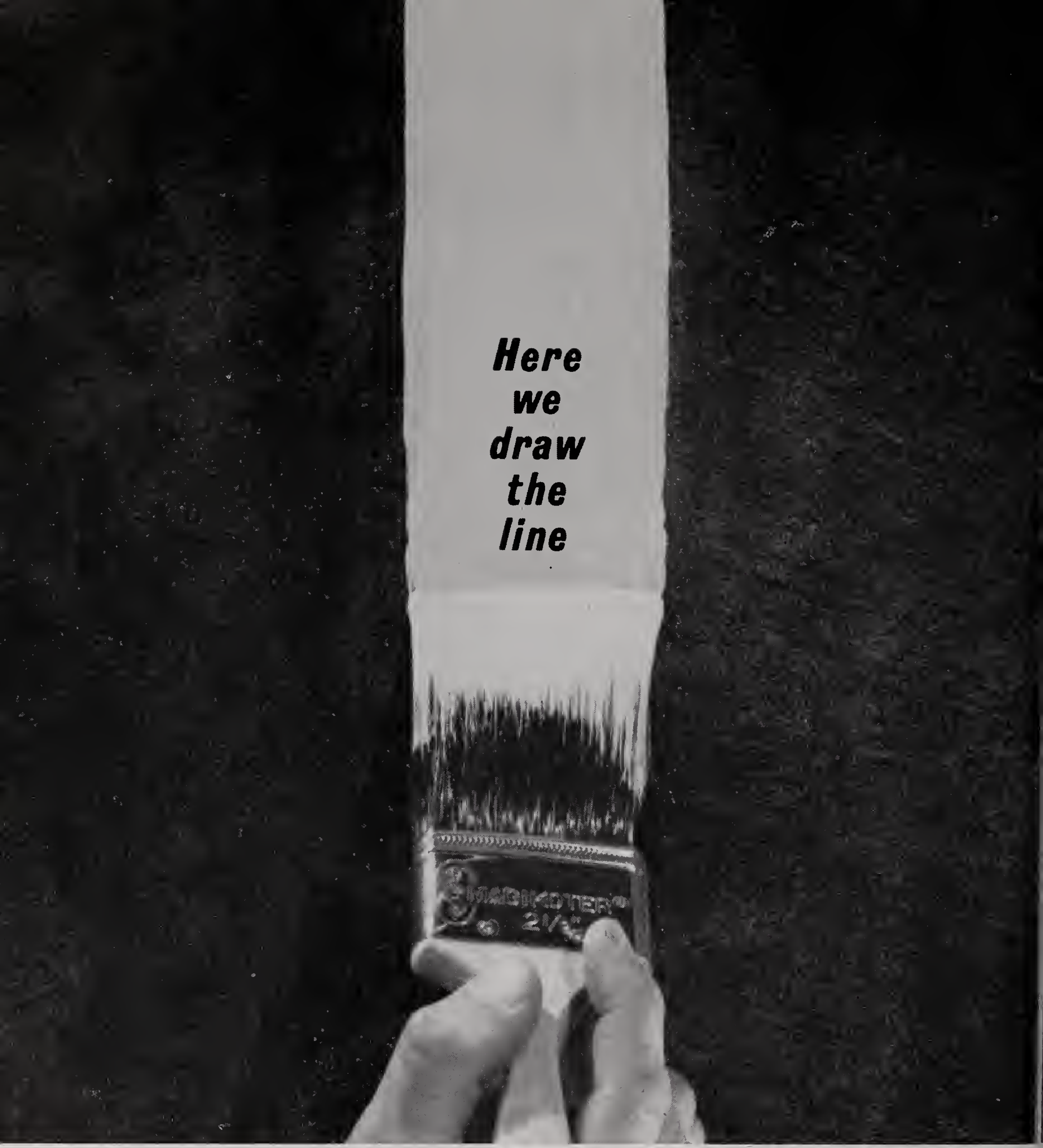

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THIS IS THE SECOND of a third series of special numbers of the MEDICAL ANNALS, the scientific material for which is supplied by medical institutions and scientific organizations in the Washington Metropolitan Area. For the SAINT ELIZABETHS HOSPITAL NUMBER the Editorial Board is indebted to Dr. Dale C. Cameron, Superintendent of Saint Elizabeths Hospital, who secured the papers which appear in this issue.

Progress Is Saint Elizabeths' Tradition

DALE C. CAMERON, M.D., M.P.H.*

Superintendent, Saint Elizabeths Hospital, Washington

Early Beginnings

IN AN ADDRESS at Saint Elizabeths' Centennial Celebration, G. Ronald Hargreaves, M.D., former Chief of the Mental Health Section of the World Health Organization, said of this Hospital, "Here is a place in which, right from the beginning, the practical art of psychiatry was developed in the bones of the institution; the institution shaped those who came to work in it, and those who worked in it shaped the institution. There has never been a lapse in the same high level of the practical art of humanistic psychiatry."[1]

In an atmosphere of changing concepts about the treatment of the mentally ill, occasioned by the work of Pinel, Tuke, Rush, and others, Dorothea Lynde Dix was the immediate moving force in the creation of what is now Saint Elizabeths Hospital. This great champion of the mentally ill was particularly active on the Washington scene in the years immediately preceding the Civil War. She was instrumental in obtaining a Congressional appropriation in 1852 for the acquisition of a site for ". . . the erection, furnishing and fitting up of an asylum for the insane of the District of Columbia and for the Army and the Navy of the United States. . . ." The first patient was admitted to the Government Hospital for the Insane on January 15, 1855, but it was not until March 3 of that year that the basic law for its organization was enacted and operating funds made available. The basic act, written by Miss Dix, states that the Hospital's ". . . objects shall be the most humane care and enlightened curative treatment of the insane. . . ."

Dr. Charles H. Nichols was appointed the first Superintendent in August 1852, prior to the construction of any buildings. In his letter of appointment, Alexander H. H. Stuart, Secretary of the Interior, the Department under which the Hospital was operated for 85 years, told Dr. Nichols, "It is the desire of the President that the proposed hospital shall be a model institution, embracing all the improvements which science, skill and experience have introduced into modern establishments."[2] Although the Federal Government's support of programs for the mentally ill has grown enormously in the 110 years since that statement was made, it is apparent that our current President shares the same general objective in regard to the Nation's mentally ill. There are other similarities between the past and the present in that the Association of Superintendents, the organization that became the American Psychiatric Association, advocated in 1851 that mental hospitals be no larger than 250 beds. Today, many larger hospitals, including Saint Elizabeths, are endeavoring to reorganize themselves into units of this approximate size. General hospitals are developing psychiatric units, and comprehensive mental health centers, close to the population to be served, are being staunchly advocated.

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* The views expressed in this paper are those of the author and do not necessarily reflect those of the United States Department of Health, Education, and Welfare.

The name of the Hospital was officially changed to Saint Elizabeths Hospital in 1916 when the Congress took cognizance of common usage that originated during the Civil War. A portion of the Government Hospital for the Insane was used for physical casualties of the Army and Navy at that time and was called Saint Elizabeths Hospital because the institution had been built on a plot of land known as Saint Elizabeths Tract. The Tract derived its name from the promontory overlooking the confluence of the Anacostia and Potomac Rivers, which had been named by the early settlers in honor of Saint Elizabeth, an Hungarian saint, who appropriately enough was especially interested in the poor and the sick.

Patients Treated

In the years since its establishment additional categories of persons have been added to those originally designated to be served. Among these are beneficiaries of the Veterans Administration, the U. S. Soldiers' Home, Public Health Service, Coast Guard, nonresidents of the District of Columbia found to be mentally ill in the District, residents of the Virgin Islands and the Panama Canal Zone, certain mentally ill persons in conflict with District and Federal criminal statutes, and, most recently, citizens of the United States without state residence who become mentally ill while abroad. In 1946 the Army and the Navy ceased sending patients from those Services, but some remain hospitalized who were admitted prior to that time.

Tables 1 and 2 indicate the growth of the Hospital throughout the more than 100 years of its existence. There were periods of very rapid expansion in the patient population during World War I and World War II, but not until 1954 was there an end to the growth in the resident population. The reduction of inpatients that has occurred since then seems to be accelerating, but it is all too slight a decline.

Staff

"Those who work with patients and maintain the essential supporting services of a hospital—paid and volunteer alike—are its most important asset. Buildings, equipment, and supplies are necessary aids, but without a dedicated staff, whose members give of themselves, there is no hospital. Saint Elizabeths has such a staff."[3]

TABLE 1: Patient and Employee Data, Saint Elizabeths Hospital, 1852–1962

Superintendents	Dates	Patient Population		Employees
		In-patient	Rolls	
Dr. Charles H. Nichols	1852–1877 1855	N.A.*	60	N.A.
Dr. William W. Godding	1877–1899 1877	N.A.	765	227
Dr. Alonzo B. Richardson	1899–1903 1899	N.A.	1,967	547
Dr. William A. White	1903–1937 1903	N.A.	2,369	N.A.
Dr. Winfred Overholser	1937–1962 1937	5,338	5,667	1,697
Dr. Dale C. Cameron	1962– 1962	6,617	7,883	3,720

* Not available

The Hospital had physicians and attendants (now nursing assistants) on its staff from the outset. In commenting on the importance of attendants, Dr. Nichols in 1855 said, "I never before so fully as now appreciated the extent to which the condition of patients is dependent on the character of their attendants."[4]

Others specially skilled in the diagnosis and treatment of mentally ill patients were added to the staff through the years. In 1884 Dr. I. W. Blackburn, for whom our Clinical Laboratory is named, joined the staff as pathologist and initiated work in neuropathology and neurophysiology. In 1907 a psychologic laboratory was established under Shepherd Ivory Franz, probably the first such laboratory in the entire country.[5] Although we now have 13 senior and staff psychologists, plus a number of psychology interns and residents, the numbers, like those of all other personnel, particularly professional, are far too few. Occupational therapy and social work were introduced during the early period of

Dr. William A. White's superintendency. Modest gains have since been made in the number of occupational therapists, and the social service staff has doubled in the last 2 years, but again, too few. The Red Cross initiated volunteer and recreational activities during World War I and continued at the Hospital until 1952. Since that time these services have been coördinated and provided by the Hospital staff. Specialists in psychodrama and dance therapy were added in 1941 and 1945 respectively. A full-time chaplaincy program was inaugurated in 1949.[6] There are now 2 full-time Catholic priests, 6 Protestant chaplains, and a half-time rabbi, in addition to numerous chaplain trainees. This distribution reflects the religious affiliation of the patients.

TABLE 2: Patients, Admissions, and Discharges, Fiscal Years 1935–1962

Fiscal Year	Average Number of Patients		Admissions	Discharges	Discharges as Per cent of Admissions	Deaths
	On Rolls*	In Hospital*				
1935–1939	5,624	5,358	987	474	48	296
1940–1944	6,849	6,477	1,885	1,295	69	387
1945–1949	6,832	6,446	1,815	1,477	81	431
1950–1954	7,175	6,896	1,481	920	62	440
1955–1959	7,458	7,039	1,501	951	63	524
1950	6,897	6,587	1,648	960	58	495
1951	7,053	6,783	1,412	928	66	424
1952	7,172	6,915	1,438	814	57	431
1953	7,361	7,079	1,524	977	64	436
1954	7,392	7,117	1,385	921	66	416
1955	7,461	7,216	1,349	748	55	502
1956	7,438	7,120	1,327	884	67	600
1957	7,413	6,994	1,615	1,014	63	507
1958	7,466	6,965	1,605	1,076	67	532
1959	7,512	6,900	1,607	1,034	64	479
1960	7,691	6,983	1,894	1,101	58	504
1961	7,933	6,976	1,981	1,395	70	440
1962	7,940	6,838	2,024†	1,649†	81	484

* The difference between "On Rolls" and "In Hospital" represents patients on convalescent leave, most of whom are in active outpatient or, quite recently, day-treatment programs of the Hospital.

† Differs slightly from comparable numbers for earlier years in that the earlier figures include "paper" discharges and readmissions made in order to change legal categories.

Treatment Modalities

Moral treatment was essentially the only treatment at the outset and remains the foundation upon which more specialized and specific modalities are built. "The bases of the so-called moral treatment were [and are] pleasant surroundings, kindness, personal attention, entertainment—in short, the basic humanities."[4]

New treatments were either pioneered at Saint Elizabeths or adopted very early after their introduction elsewhere. In 1890 Dr. William W. Godding stressed the importance of experimentation with hypnotism. Hydrotherapy was introduced in 1897. It is still used occasionally for selected patients, but it has been largely replaced by the tranquilizing drugs, which were introduced in the early 1950's. Stimulant, sedative, and hypnotic drugs including opium were used as palliatives at the outset. Dr. White gave great impetus to the application of psychoanalytic concepts shortly after the turn of the century. His influence in this regard was felt far beyond the confines of Saint Elizabeths. Individual psychotherapy was recognized as an important treatment method, and by 1917 a limited number of physicians were relieved of all other responsibilities so that they might concentrate in this area. Although all classes of medical personnel now number about 125, they are still too few to make individual and group psychotherapy available to all of the patients who would benefit from these treatment approaches. As a matter of fact, considering inpatients only and ignoring the approximately 1,000 who are seen as outpatients, the physicians of the Hospital can spend, on the average, no more than 30 minutes per week with each patient in any kind of therapy. Obviously, many patients receive much more attention than this and others, unfortunately, less. Psychiatric somatic therapies, including Sodium Amytal®, insulin shock and subshock, Metrazol® shock, electroconvulsive therapy, prefrontal leukotomy (very limited), and tranquilizing drugs were introduced into the Hospital as they became available to the medical profession.

In 1920 a Department of Internal Medicine was established under the direction of Dr. Watson W. Eldridge, for whom our General Medicine and Surgery Building is now named. Under his supervision malarial therapy for the treatment of general paresis was first used (1922) in the Western Hemisphere.[7] These developments and innovations are characteristic of the Hospital's past, and I trust its future.

Training and Research

The Hospital has long been involved in the training of personnel for work at the Hospital and for at least 70 years in training persons in various mental health disciplines for work in this and other psychiatric settings. One of the earliest formal programs was that for nurses. A 2-year school, established in 1894, was later converted to a 3-year school and continued to function until 1952.[8] That training and research, as well as the highest possible level of service to patients, are a part of the long tradition of Saint Elizabeths is witnessed by the fact that Dr. White started a *Bulletin*, the third issue of which (1911) contained a bibliography of 126 titles written by personnel on the staff of this Hospital.[9]

Dr. William Alanson White, who became Superintendent at the age of 33, was internationally known in the field of psychiatry and contributed vitally to the development of training and research interests not only at Saint Elizabeths Hospital but elsewhere. During World War I the Army and Navy sent hundreds of persons to the Hospital for training. After that War the Veterans Administration utilized the training resources of the Hospital for several years.[10] The staff has contributed to the instruction of medical students in the local universities through the years. Much of the early writings in forensic psychiatry and psychopathology emanated from Saint Elizabeths. Again, in World War II the training activities of the Hospital were greatly expanded, as were the clinical activities of the Hospital.

There are now on the Hospital campus at any one time approximately 200 students in full-time training, in addition to numerous medical and other students on a part-time basis. Among the full-time students are some 35 residents in psychiatry, approximately 15 ordained ministers studying the special problems of the ministry to the mentally ill, about 10 psychologists at both the master's and doctorate level, 2 residents in pathology, 2 medical and 4 dental interns, several interns in psychodrama, 24 social workers in field placements from Catholic and Howard Universities, 3 surgical residents on affiliation from George Washington, 1 resident in internal medicine (for neurology), 2 in radiology, and 1 in physical medicine from the same school, students from several schools in affiliation in occupational therapy, 90 undergraduate nursing students from 12 schools, and from 3 to 40 graduate students in nursing education, nursing administration, and psychiatric nursing from Catholic University. Teachers in each of the disciplines mentioned are on the staff and their activities are coördinated by the Director of Training, Dr. Francis N. Waldrop.*

In addition to the pre-service programs mentioned above the Hospital is also involved in inservice training of nurses and nursing assistants in elementary and advanced courses. Last year approximately 750 such personnel were involved in this program.

As mentioned earlier, the Clinical Laboratory was started before the turn of the century, and rather shortly became involved in research in neuropathology and neurophysiology. Such work continues. Incidentally, the Clinical Laboratory has undergone substantial automation under the leadership of its current Director, Dr. James D. Solomon, and currently carries out approximately 200,000 clinical laboratory procedures per year. Research flourished under Dr. White and received another powerful stimulus in 1957 when Dr. Winfred Overholser, then Superintendent, and Dr. Robert H. Felix, Director of the National Institute of Mental Health, established at Saint Elizabeths Hospital the Clinical Neuropharmacology Research Center of NIMH under the leadership of Dr. Joel K. Elkes. In 1961 the Behavioral and Clinical Studies Center was established by the Hospital and integrated with the already existing research activities. Within the integrated research program are basic laboratories wholly supported by the National Institute of Mental Health in the fields of neuropharmacology, neurochemistry, neurophysiology, and psychopathology; clinical studies jointly financed by the Hospital and the National Institute of Mental Health, under the leadership of Dr. Fritz A. Freyhan, who is also Clinical Director of the William A. White Service; and the behavioral studies being carried out under the leadership of Dr. Waldrop and largely financed by the Hospital's research budget. Some research grants have been received by the Hospital to help support this work. There are now approximately 37 professional and 45 nonprofessional persons working full time in research in this combined research program. In addition, many of the other members of the staff carry on some research activities on a part-time basis.

Present and Future

Although Saint Elizabeths Hospital has an enviable record over the past century, much yet remains to be done. The Hospital has been plagued with overcrowding for many years despite considerable new building following World War II. Building since that period has been primarily for the replacement of obsolete facilities, and there are many such facilities yet to be replaced. At present we have 6,800 patients in space which, according to minimal space standards, should house only 5,100 patients or, according to optimal standards, approximately 4,200 patients. Conversely, there are hundreds of patients who no longer require mental hospitalization and could leave if adequate alternative resources were available in the community. Among the needed community facilities are additional nursing-home beds, halfway houses, day-treatment programs, chronic disease hospital beds, and increased availability of foster homes. It is next to impossible to arrange for the transfer of suitable patients to nursing homes when the maximum payment available through the Welfare Department to an indigent patient for nursing-home care is $100 per month.

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* See Dr. Waldrop's article in this issue on "The Training Program in Psychiatry at Saint Elizabeths Hospital."

Many legal issues remain to be solved. Dr. Overholser was instrumental in removing the mandatory jury trial in 1938, but the commitment laws require further change to facilitate voluntary admissions, first authorized in 1948, and to separate the judicial finding of incompetency from court authority to detain a person for treatment. Only 16 per cent of our patients are now admitted as voluntary patients. With further improvements in the staff and facilities and modifications in the legal framework relative to admission, it is my firm conviction that within 15 years it would be possible to admit 75 per cent on a voluntary or informal basis.

It is my belief that the Hospital should be organized into relatively small, multipurpose functional units, a process that has been started with the establishment of one such unit (William A. White Service). This would enable a patient to be admitted to one of these several units and receive treatment by the same personnel throughout the period of his necessary hospitalization. At present most patients who are not discharged within a few weeks are transferred from service to service as their behavior changes, a pattern now extant in most public mental hospitals in the country. Smaller, integrated units will facilitate continuity of treatment for the patients once admitted to hospital, but that is not enough. We need to facilitate continuity of treatment for patients before and after hospitalization. Hospitalization is only one facet of a community mental health program, which should include not only the private office and hospital practice of psychiatry, but also outpatient, day-hospital, night-hospital, nursing-home, foster-home, chronic-disease hospital, and other community services. These services should be coördinated to the end that the patient may have the maximum possible continuity with his therapist and orderly transfer of responsibility from one therapist or group of therapists to another when such transfer becomes necessary. Such transfer should rarely be necessary within a hospital. The relation between the general practitioner in the community and the psychiatrist in a public or private hospital should be the same as that now prevailing between general practitioners and other medical specialists when specialized treatment in a general hospital is required.

In his closing remarks at the Centennial Dr. Hargreaves made another statement well worth recalling: "Owing to these swings in our practical art and the way in which it tends to cling to formulations which the experimental scientist is beginning to discard as having served their purpose, we have got to be very careful what we export. We must export not a rigid dogma but rather an inquiring frame of mind, a humanistic practice, and the capacity to develop and change which has characterized Saint Elizabeths Hospital for a hundred years, and to which we pay homage at this celebration."[1]

May I solicit the interest and coöperation of all physicians and the members of related health professions in the Washington Metropolitan Area in fostering the great tradition of progress at Saint Elizabeths Hospital.

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The Training Program in Psychiatry at Saint Elizabeths Hospital

FRANCIS N. WALDROP, M.D.

Director of Professional Training and Director of Behavioral Studies Research Branch, Saint Elizabeths Hospital, Washington

FOR MANY DECADES Saint Elizabeths Hospital has served as a major center for professional training in medical and paramedical fields concerned with the problems of mental illness. As the mental health field itself has undergone expansion over the years the various training programs conducted by the Hospital have steadily grown in number and complexity. This growth has been particularly striking since World War II and has resulted in the emergence of training functions as one of the major missions of the Hospital. The rich clinical opportunities afforded by a 7,000-bed institution have provided a logical and indispensable medium for the culture of training activities, while the development of an extensive and diversified program of clinical and basic science research has contributed to the academic fertility.

At the present time fully accredited programs of professional training are offered in psychiatry, clinical psychology, psychodrama, and clinical pastoral training. The Hospital is approved for 2 years of residency training in anatomic pathology and for 1-year rotating internships in medicine and dentistry. By formal arrangements with universities and other training centers Saint Elizabeths Hospital provides approved clinical and didactic training for periods ranging from 3 months to 2 years, depending on the program, in neurology, general surgery, physical medicine and rehabilitation, radiology, psychiatric nursing, occupational therapy, and psychiatric social work. Additional training activities are provided for medical students (serving clinical clerkships or elective assignments) and for graduate and undergraduate students in psychology and the social sciences. From time to time special institutes or brief intensive courses are arranged for attorneys, police, members of the U. S. Secret Service, clergymen, and other groups whose work may bring them into contact with mentally ill persons.

Organizationally, all training activities of the Hospital are coördinated by, and are under the administrative supervision of the Director of Professional Training, although the training program within each discipline has its own Training Director who is responsible for its academic and clinical curriculum. The only exception is the Residency Program in Psychiatry, for which the Director of Professional Training is immediately responsible.

Throughout the long evolution of training activities at Saint Elizabeths Hospital the training of graduate physicians in psychiatry has always occupied a position of central emphasis.

General Aspects

The physician who wishes to specialize in psychiatry must, after completing an approved internship, undertake a 3-year residency training program, followed by 2 years of specialized experience, in order to qualify for examination by the American Board of Psychiatry and Neurology. Saint Elizabeths Hospital conducts such an accredited 3-year residency program and presently offers positions for 42 residents. The objective of the program is to provide an eclectically-oriented intensive clinical and academic experience in general psychiatry, on the basis of which the physician may engage in the general practice of his specialty or, if he so elects, pursue further training in a subspecialty area of the field (e.g., clinical research, child psychiatry, psychoanalysis, etc.).

Since psychiatry is primarily a clinical specialty, it is essential that the principal focus of training center on supervised, progressively responsible clinical experience in the diagnosis and management of patients with a full range of psychiatric disorders. But this experience must simultaneously be informed by a growing knowledge of the basic science areas and of the clinical theory which undergird clinical practice. Psychiatry is perhaps unique among the medical specialties in the degree to which it draws upon a diversity of basic science areas, for many of which the physician has had little preparation in his earlier medical career. These basic areas range from neurophysiology and neurochemistry to psychology and the social sciences, from the physiology of the cell to the equally complex function of the individual in a social context. Depending upon the nature of the presenting symptoms of a particular patient and the individual and social context in which they occur, the psychiatrist may have to call upon somatic, psychologic or social modalities of therapy, or a combination of these. To develop clinical and therapeutic skills of this diversity in the psychiatrist-trainee and to relate them to the theory and content of the supporting basic science areas impose many problems for curriculum planning. In the Psychiatric Residency Training Program at Saint Elizabeths Hospital the clinical and academic work has been divided into a group of core components, which constitute the bulk of the program, and a group of additional components which are supplementary in nature. The core components emphasize supervised clinical experience supported by didactic seminars.

Core Components

All residents completing a 3-year program in psychiatry at Saint Elizabeths Hospital must participate at a satisfactory level of performance in these component areas, both in terms of growth in clinical competence and in academic knowledge. These components, while described here separately for presentational purposes, are often closely interrelated and cannot be separated in the learning experience of the resident.

Clinical psychopathology. This component emphasizes the recognition, description, and assessment of the signs, symptoms, and syndromes that constitute the clinical phenomena of psychiatry. Particular attention is devoted to cultivation of the technique of the psychiatric examination and interviewing skills on the part of the resident. The concept of assessment includes the evaluation of premorbid behavior patterns, historical development of symptoms in their social and interpersonal context, and presenting pathology. The objective of this component of training is to assist the resident in becoming a sensitive observer, accurate describer, and competent reporter of the phenomena of mental illness as propaedeutic to physiodynamic, psychodynamic, and psychosocial formulations of illness and therapy.

Schools of psychiatric thought. This component is concerned with an examination of the principal theoretical models in psychiatry as seen in the context of their historical evolution. This represents a major didactic area in which, through seminar discussions based on assigned reading, the underlying assumptions and formal properties of these models are presented. Included are such issues as psychogenesis, conflict, anxiety, mechanisms of defense, symptom-formation, character structure, etc. The application of this component in the clinical setting in the diagnosis and management of individual patients is a necessary concomitant of the academic presentations.

Developmental psychology and child psychiatry. This area focuses on the early development of the personality and on the evaluation and treatment of psychiatric disorder in childhood (including problems of subnormality and organic reaction types, as well as psychogenic and sociogenic disorders). Special attention is given to the clinical examination of the child and his family, the evaluation of the biologic, interpersonal and social forces that enter into the child's experience, the role of community social agencies, and approaches to outpatient and residential treatment.

Social psychiatry. This component deals with the sociologic and public health aspects of mental disorder, including the dynamics of community, family, and other social groupings as they relate to the expression, tolerance, and ways of coping with pathologic behavior. Attention is given to patterns of use of available mental health resources in the community, procedures for commitment and alternatives to commitment, sociometrics of mental disorder, the concept of "social competence," the problem of continuity of psychiatric care, and hospital-community service relationships. A closely related area involves the nature and use of social modalities of therapy, particularly for hospitalized patients.

Clinical neurology. The psychiatric resident spends a substantial portion of his first year of training in clinical neurology, with particular emphasis on the neurologic examination, clinical neuropathology, and electroencephalography.

Psychiatry in relation to other medical specialties. This component includes both didactic seminar work and clinical assignments dealing with psychophysiologic reaction patterns, patterns of psychologic reaction to acute and chronic medical and surgical illnesses, psychologic problems of the physically handicapped, psychiatric management of the neurotic and psychotic patient who presents intercurrent medical and surgical problems, and practical psychologic issues centering about infertility, marriage counseling, etc.

Treatment modalities in psychiatry. This is a complex area which is intimately fused with the foregoing components. Somewhat arbitrarily, the modalities of therapy may be grouped as follows:

Psychotherapy. This ranges from counseling and supportive treatment to intensive, investigational therapy, both in the individual and group setting. While certain general principles may be conveyed through the medium of seminars, the principal technique of training in psychotherapy requires that the resident conduct such treatment of patients under the continuous and formal supervision of senior staff. Consultants from the community are provided to supplement Hospital staff. The supervision is carried out on an individual basis, each resident working with a number of supervisors during his period of training.

Milieu and social therapies. These modalities of treatment involve the psychiatrist as the leader of a multidisciplinary team (often including the psychologist, nursing staff, occupational therapist, social worker, psychodramatist, and recreational therapist) in developing individual and group programs of treatment designed to promote the social and vocational rehabilitation of psychiatric patients. These programs of treatment are also important in forestalling development of the chronicity to which many psychiatric illnesses are prone. Training in this area, as in individual psychotherapy, requires extending to the resident responsibility for such treatment under continuous supervision of senior staff.

Somatic therapies. The resident is provided both didactic and clinical experience in pharmacotherapy, electroshock treatment, and related techniques. Developments in central nervous system pharmacodynamics and behavioral pharmacology during the past decade and the widespread use of psychoactive drugs in the management of certain symptoms presented by the psychiatric patient require substantial training in this area for the resident in psychiatry.

Supplementary Components

In addition to the preceding core components, there are a number of areas which are included in the training program for psychiatric residents at Saint Elizabeths Hospital. In general, these are less clinical in emphasis and serve to broaden the resident's perspective of his specialty and its relationships to other fields.

History of psychiatry. This is presented in a seminar series designed to review the major conceptions of mental illness and the care of the mentally ill from classical antiquity to the emergence of current views and practice.

Psychiatry and the law. As part of his clinical training the resident is assigned to the Hospital's maximum security unit to work with patients charged with criminal offenses and who present a wide range of problems in forensic psychiatry. In addition, a seminar series is conducted to supply systematic emphasis on such subjects as commitment and adjudication procedures, legal rights of the mentally ill, the problem of consent, mental competence in criminal cases, the psychiatrist as an expert witness, testamentary capacity, confidentiality, etc.

Psychiatry and the behavioral sciences. This area includes the presentation and review of theoretical models which have provided experimental approaches to the study of human behavior. Though most of these models have originated outside the field of psychiatry, some are exerting a growing influence upon psychiatric thinking. Included are models drawn from behaviorism, classical conditioning theory, operant conditioning, learning theory, information theory, ethology, and comparative psychology.

Psychiatry and the basic medical sciences. Material in this area is presented in a seminar series which is complementary to that for Psychiatry and the Behavioral Sciences. Emphasis is given to points of view and models relevant to human behavior and functioning of the nervous system drawn from neuropathology, neurophysiology, neurochemistry, behavioral pharmacology, genetics, and constitutional medicine.

Research methods in psychiatry. Through the medium of a seminar series in the third year an introduction is provided to the methods and approaches presently available for psychiatric research, with attention to such issues as reliability, validity, functional relationships, experimental design, experimental and statistical control, descriptive and evaluative statistics, etc. It is not the objective of this seminar to develop research skills in the resident but rather to acquaint him with sufficient basic information that he can become a reasonably critical and informed consumer of research in his field.

Scientific paper. Each resident, in his third year, is expected to prepare a formal scientific paper which meets general standards of acceptability for publication or presentation at a scientific meeting and to present his paper at a Hospital staff meeting. The resident may select his own subject matter, and guidance is available for the

(*Continued on page 338*)

Some Newly Found Letters of Dorothea Lynde Dix

RAYMOND L. HOGAN, M.D.

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One of Mathew Brady's pictures of our impolitic General Joseph Hooker shows the General on a dark charger in front of some decent white tents. The background is a massive, long, red brick building—something of a cross between an ancient college and an armory. This is Center Building, the first built of Saint Elizabeths, the Federal Mental Hospital in the Capital. It is one of Washington's public buildings which has served and is serving its original function after more than a century. Here in an old storeroom was recently found by a stroke of serendipity a part of the correspondence of the first Superintendent, Dr. Charles Henry Nichols. An archivist must explain the unusual miscellany of these letters. Buried among offers to sell barrels of oysters and, for example, recommendations of a good workman for the piggery, were more personal letters to the good doctor. Scattered among the collection were 18 letters of Dorothea Lynde Dix to Dr. Nichols.

These letters were written between 1858 and 1868 (most of them between 1858 and 1861), when this heroine was in the high noon of her splendid activity. Under Biographical Names in Webster's "New Collegiate Dictionary" you will find "Dorothy Dix," the pseudonym for the Hearst journalist who used to answer letters of the lovelorn, but not "Dorothea Dix." Appropriately, her biographer, Helen Marshall, subtitles her book, "Dorothea Dix," "The Forgotten Samaritan."

Here are some of the letters in no particular order, with some reflections they elicit.

Somewhere on the Mississippi River
May 1859.

Dr.

I am afraid yr. Hospital has an Elephant in the portrait since there seems no just the right place for hanging it — I am clear that the only light which will suit the coloring and effect generally is behind the desk — I am confident it will show incorrectly where we thought of placing it. It can stand in my room on the clock if you prefer though it is hardly safe.

DLD

Is it finding too much in this modest note to find a bit of vanity?—and why should she not have a bit? This portrait which St. Elizabeths proudly shows in its Dix Building lobby is a handsome thing in the best Gilbert Stuart style. But it, like the 3 other oil paintings of Miss Dix, was done from a daguerreotype of her quite young womanhood. She had it so, and the result is pleasantly idealized. No Cromwell, she, to be painted with her warts. "Behind the desk" must have been "just the right place."

In the course of her life's work she visited the "Poor Houses" and jails to seek out the mentally ill who were found there in large numbers. But, after seeking out these people she did something about them. By effective propaganda and exhortation she had an important part in the founding of about 30 mental hospitals in this country and at least 5 in other countries. And she had the prosaic practicality of the saints in her fervor, as witness this letter to the good doctor written during a trip west.

Western Pennsylvania Hospital
for Insane
Pittsburgh July 9, 1860

Dear Dr.

You will do me a great favor if you will immediately put on paper your opinion of the best roofing material for Hospitals. All things being equal would you use galvanized Iron or Slate — the question is what is best for the purpose — How would you construct all ward windows — are both sashes to be Iron — would you have the lower sash open quite up — should the upper sash be fixed. How should they be raised — by concealed weights and rods or how —

Doors swing out upon halls — or into rooms, rounded edges important in plastering or square?

Please write at your very first convenience and address to Dr Reed as I shall be gone probably.

Can work be certainly correct in hospital building if the architect is on the ground only once in two weeks or so? —

K—— is paid 3 percent on all monies expended; and the walls are badly built. I am much concerned

Yr. fd.
DLD ——

My love to Mrs. Nichols.

But in an earlier letter, listen to this awesome woman in a prophetic mood as she castigates her old friend.

May 13, 1858
Phila.
Thursday A.M.

Dear Dr.

—— Dr. Hare has been at the edge of this life for 14 days — and may last yet some time — recovery is not looked for at all.

—— I must, though reluctantly say briefly one thing — it is I think possible that your patients can be specially and generally made more comfortable in there condition.

I am aware that you have for a long time had many engrossing objects — but it may be used to your injury — that these have been thought to encroach on your professional duties. I say this of myself — though I have repeatedly heard the remark in all the past year and have tried to tell you this out of friendship for you and solicitude for the patients.

Yr. friend Steadfastly
D. L. Dix

In the next there is an unusual combination of intimate narrative to a friend (largely omitted in this excerpt) with waspish polemic at the end. Note that she omits her usual "Yr. fd."

Cincinnati
August 3d 1858

From Tennessee and Kentucky; for Indiana ——

Dear Dr. ——

I must write rather hurriedly, but several things must be said — first I am glad you are making some excursions and propose others — for your own sake no less than for Mrs. Nichols sake — to whom this is due as a desireable recreation as well as a proper evidence of rational care for yourself. —— I have been to see here that series of Dens in three wooden houses and a shanty at Lick Run — where are 246 poor wretches huddled together in a way that shames humanity. I go soon to Indianapolis — then return by Monday to Dayton — Columbus — and on to Wheeling — and Weston, Va — thence to W. R. (?) as speedily as maybe but it will be the last of the month before I pass the Baltimore and Ohio R. R. I apprehend. —

I congratulate you on having now a friend and really Competent Assistant in Dr. Jones, and on the unanimity of the appointment — In regard to Mrs. Allen I have nothing more to say than that so far as myself and my friend Mrs. Prince are concerned I think your language and tone as uncivil and ungentlemanly as your opinion is incorrect — As this is not the first time you have allowed yourself to say what was not very fair or friendly — I shall begin to think I am to take such things from you as a matter of course and look upon it as "Nichol's way" — "It is due to the probable truth for me to say that your friend Mrs. Prince recommended her to get rid of her as a great many otherwise honerable and conscientious ladies do. It has come to be generally understood I believe that principles of honor and conscience are inapplicable to horse dealing and servants — hiring — if the best men will cheat their own fathers in a horse trade — it is not difficult to imagine that the best women will deceive their own friends in the recommendation of House Servants" — thus you write! After this I think we may well hesitate to attempt doing you a service in supplying servants. My love to Mrs. Nichols. I hope the little excursions will be multiplied.

D. L. Dix

Again in 1859 she made a wide trip through the South and up and down the Mississippi. That winter she asked more than a third of a million dollars from the legislatures for the mentally ill. Here are a couple of letters on the busy way.

Gladstone
March 8, 1859

Dr Dr.

Yours reached me the post following the day I last wrote you. I was glad to hear from you and Mrs Nichols and to know how all is going on at St Elizabeths. I sincerely hope your appropriation will not fail, though what is to save you from disappointment under this prodigal administration where corruption swallows up the revenues which should sustain the Institutions of the Republic, I cannot see. I am very busy and cannot now foresee how soon I shall escape from these low countries where one is in hourly danger through floods and flames. —

—— I go from Gladstone tonight to Tuscaloosa by Post hack — 40 miles and expect to be on the road (or in it) 14 hours — the road is terrible to anticipate after Saturday's experience, the Hack being five hours with six horses and light load changing once coming 18 miles from Marion to this place — An alarming accident by which no one was hurt and but one car broken up — occasioned by the sinking of the road — a mere quicksand, supporting the rails — took place 9 miles from Selmac — we were coming but 4 miles an hour or the destruction must have been total. Farewell. Love to Mrs Nichols and kind regards to Dr. Jones and Mr. Tyler.

The next is written from the State Hospital at Trenton which she called "my first born child." Note the date—the reformer was also a seer.

Trenton, Jan 11, 1861

Dear Dr.

I arrived here from New York day before yesterday and consequent on additional letters from Kentucky have decided to go there next week. I thank you for letters forwarded and enclose stamps also for the gratuity given to the man who held my traveling bag at the depot, — as that was a personal obligation. Our national affairs do not seem to me at all nearer a peaceful settlement than heretofore. I see no probability of this while the spirit of revolution is rife and believe the only chance of making peace will be after a period of positive suffering an experience of exceeding distress. Now passion and politicians rule the public mind — and still the strength of the country is weakness and folly — Not a leading mind to direct the masses safely nor a strong hand to guide the Ship of State.

I have only time to add sincerest wishes for your whole success in your arduous labors of building.

Yr Fd D L Dix

The setting of the last letter is given in one from Dr. William L. Peck of Ohio.

Central Ohio Lunatic Asylum
Columbus May 27, 1870

C. H. Nichols, M.D.
Dear Doctor

I recd. your note relating to the case of Miss Dix yesterday. It gave me pleasure to learn that she was better and that my worse fears are not to be realized. She came to us much broken down physically, the result of her protracted journeyings through the South,* and was soon attacked with malarious fever accompanied with severe Bronchial disease. The Bronchial affection soon subsided and was followed with what seemed Rheumatic Neuralgia. The fever was markedly intermittent and each exacerbation was followed by copious sweating. During the first few days after her arrival at our place when she complained but very little I noticed that the circulation in the fingers was very imperfect so much so indeed that I remarked to Mrs. Peck that Miss Dix must be suffering from some disease of the arteries. You may well imagine that when the serious trouble in the foot first presented itself I had forebodings of grave results.

I am glad to know that we may now look for a favorable issue.

I thank you for your letters and should you see her again soon, please let me hear from you again.

Very Truly
Wm L Peck

A few days later Dr. Nichols received a letter from the invalid herself (written in pencil).

Morning June 6th 1870
Trenton N. J.

First of all good friend the salutations and wishes of the beginning of this working day. ——

—— I am as well as anyone should suppose after considering the prospects of the Insane in Eastern Massachusetts —

Seriously and disgustedly I am in better health but do not use the foot because it turns purple when I essay to walk — but I think I shall move next week or this as may be possible. —

Truly yrs
D. L. Dix

She was to live 17 more years, the last 7 in the loving care of her "first born child" in Trenton. At her burial in Mount Auburn Cemetery in Cambridge, Mass. in 1887 Dr. Nichols stood by with a few friends. Telling a friend of this he wrote, "Thus has been laid to rest in the most quiet and unostentatious way the most useful and distinguished woman America has produced."

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* Her biographer, Helen Marshall, tells that on her journeys into back country she carried an emergency kit containing carpenter tools, nails, rope, leather for patching, and a can of axle grease.

The Effects of a New Phenothiazine on Chronic Schizophrenic Males*

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THIS STUDY was made to determine the effects of a new phenothiazine, WY 2445† (carphenazine maleate), on the behavior of hospitalized chronic schizophrenic males. At the beginning of this study nothing had been published on the use of the drug, but clinical trials had been made with over 500 patients. Results had been favorable in 20 to 25 per cent of chronic schizophrenic patients studied. The possible therapeutic effects of the drug were those of decreasing hyperactivity and motivating underactive patients. Side-effects had been minimal and mainly along the line of extrapyramidal symptoms, predominantly of the akathisia type. One case of oculogyric crisis had been observed. The extrapyramidal symptoms had been controlled with small doses of benztropine methanesulfonate (Cogentin®). Since our study, articles on the subject have appeared in the literature.[1-10]

Procedure

Thirty chronically ill schizophrenic men ranging in age from 27 to 64 years were selected in the setting of a public mental hospital. These patients had been hospitalized continuously for 8 to 40 years with persistent symptoms of schizophrenia. All of them resided on the same ward and had received no medication within recent months. For the purposes of this study they were allocated randomly to 2 separate groups of 15 each and were found to be homogeneous with respect to symptoms and ward behavior under study. One group received the active compounds in tablet form, and the other group received a placebo tablet identical in appearance. The mean age of the patients comprising the active drug group was 50.27 years, and the mean duration of hospitalization was 22.10 years. For the placebo group the figures were 48.93 and 23.0 respectively. Group assignment of individual patients, with a corresponding medication code, was known only to the pharmacist, although a sealed copy of the code was available to the Chief of Service and the Nursing Supervisor for emergency use. The tablets were dispensed by the pharmacist (in accordance with the code) in individual bottles marked only with the patient's name and case number.

Prior to administration of the drug all patients were evaluated by 2 psychiatrists at the same interview setting, but independently, using an 18-item rating scale of symptoms. This Physician's Rating Scale for Chronic Schizophrenia[11] was a modification of the Lorr Scale and contained particularly those items relevant to the symptoms of chronic schizophrenia. Specifically, such areas as motor behavior, speech, affect, and abnormal mental content were included. It should be emphasized that initial ratings were carried out only after prior establishment of reliability between the 2 psychiatrists and were repeated at the end of the twelfth and twenty-fourth week of drug administration by the same psychiatrists. At the same time-intervals described above, ratings were also made by the ward charge nursing assistant with the use of a Nurse's Rating Scale of Ward Behavior. This rating scale included such areas of behavior as attitude to work, attention to dress and person, relation to medical and nursing personnel as well as to other patients, toilet habits, behavior at meals, speech, and motor behavior. It should be emphasized here that these ratings were based on observation made over a period of a week rather than a single interview.

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* This study was carried out on West Lodge Service, Saint Elizabeths Hospital, and the findings of this article do not necessarily represent the official opinion of Saint Elizabeths Hospital.

† The drug was furnished by Wyeth Laboratories. Since completion of this study the drug has been marketed by Wyeth Laboratories, Philadelphia 1, Pa., under the trade name Proketazine.

Prior to administration of the drug all patients had physical examinations and complete blood counts, and no significant abnormalities were noted. The medication was ordered for all patients throughout the study by the same physician, who also examined the patient at regular intervals for side-effects. The tablets used for the study were administered in 12.5 mg. units and wherever possible were administered by the same nursing personnel. A single tablet was given to the patients on the first day; thereafter the drug was given every 12 hours, gradually increasing the dosage to a maximum of 8 tablets (100 mg.) per day by the fourth week. Thereafter maximum dosage was maintained throughout the study except in the case of a few patients presenting side-effects. During the course of the project 2 patients in the active group had to discontinue the drug for administrative and medical reasons not related to the drug treatment.

Results

Initial ratings of patients by physicians and nursing personnel revealed no significant differences between the 2 groups with respect to symptoms or behavior.

Physicians' ratings of symptoms. Physicians' ratings of the psychologic symptoms after an interval of 12 weeks and again after an interval of 24 weeks showed no statistically significant difference between the experimental group receiving the active medication and the placebo group.

Nurses' ratings of behavior in the ward. In contrast to the physicians' findings with regard to symptoms, the behavior of the patients in the ward differed for the 2 groups. After 12 weeks and again after 24 weeks the control group showed a trend toward improvement in ward behavior, but this fell short of significance statistically. On the other hand, the drug group showed a significant ($p < .01$) degree of improvement on both occasions. (Improvement was significant after 12 weeks and after 24 weeks with respect to the original evaluations at week 0, but no significant additional improvement occurred between week 12 and week 24.) Improvement in patients was specifically reflected by more concern for personal appearance and a more coöperative attitude toward work and toward ward personnel. No marked changes in activity were noted, but patients became more accessible to guidance of activities toward constructive goals. This improvement in behavior was noted in more than half the patients in the drug group.

Side-effects

A form entitled Side-effects and Treatment Record was used throughout the study for documenting frequency and type of side-effects. The only side-effects noted were signs resembling the parkinsonian syndrome, which ranged from mild to moderately severe. The dosage had reached 100 mg. per day prior to the appearance of the side-effects. In 1 case side-effects appeared during the first week of maximum dosage. In 2 additional cases signs appeared during the fourth week, in 3 additional cases in the fifth week, and in 1 additional case as late as the tenth week. Control of these side-effects was accomplished by either the reduction of the dosage, addition of benztropine methanesulfonate (Cogentin), or both. In no instance was it necessary to reduce the dosage below 50 mg. a day. It was also possible to increase the dosage in some cases after an initial reduction without producing further side-effects.

Discussion

Reliability between independent physician-raters remained high throughout the project. The drug-treated group and the control group exhibited similar patterns of response with respect to physicians' ratings of type and severity of psychopathologic symptoms, and no significant differential effect appeared which might be attributed to the action of the drug in these chronically ill patients. In contrast to the physicians' findings with regard to symptoms, the nurses' ratings of patients' behavior in the ward showed a statistically significant improvement only for the group receiving the active medication. On the basis of this study it is suggested that carphenazine maleate may be effective in improving ward behavior of hospitalized chronically ill schizophrenic men but that it has little or no effect on the clinical psychopathologic symptoms as evaluated by the techniques used.

(Continued on page 338)

Surgical Management of an Unusual Urethral Calculus

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Urethral calculi occur frequently, but the number of such stones which become impacted is quite small. The usual calculus is a few mm. in diameter and passes through the urethra without ever causing any discomfort. Urethral calculi are described as primary when they are formed in the urethra and secondary when they are formed in the kidneys, ureters, bladder or prostate gland and migrate to the urethra. Secondary calculi are 11 times more common than primary ones.[1, 2] In some Oriental countries where, because of dietary conditions, vesical calculi are common, the incidence of urethral calculi in adults and children is also higher than it is in Western countries.[3]

In females most urethral calculi are found in diverticula. In about half such cases there is an associated vesical stone, or there are multiple calculi.[4] Urethral calculi are more common in the male than in the female, probably because of the greater complexity and length of the urethra in the male. They usually occur in patients between the ages of 45 and 55.[1] In males the urethra is 8 mm. in diameter and is usually collapsed. It may be stretched to a diameter of 30 to 45 mm., depending upon the variation in caliber of its various parts. There are 4 areas where constriction may normally occur: the external meatus, the penoscrotal junction, the membranous urethra, and the internal sphincter. A stone may lodge in any of these areas or in an area of acquired narrowing such as may result from an enlarged prostate, an enlarged verumontanum, or a diverticulum.[5] The largest number of stones (41 per cent) occur in the prostatic urethra; the second largest number (23 per cent) occur in the bulbar and scrotal areas.[1]

After studying 250 cases of urinary calculi Murphy and Pyrah[6] reported hydroxyapatite and calcium oxalate to be the most common constituents. There are 2 main types of calcium oxalate stones, striated and crystalline. Murphy and Pyrah found impaired renal function to be associated with striated calcium oxalate stones 10 times as often as with crystalline stones. There was a correlation between hypercalciuria and stones of calcium oxalate. Struvite occurred most often in calculi that contained no calcium oxalate. There is an association between calculi containing struvite and urinary tract infection.[6]

A patient with a urethral calculus may complain of complete urinary retention or of difficulty in voiding. He usually complains of dysuria, frequency, and incontinence. He may also have pyuria and hematuria. Some patients are amazingly asymptomatic, especially if the condition is one of long standing.[7]

Diagnosis is confirmed by taking a careful case history, by palpation of the stone along the ventral surface of the urethra, and by roentgenography, urethroscopy, and insertion of a metal sound. Grating during the passage of a sound is always indicative of a stone. Results of X-ray studies were accurate in only one-fourth of the cases reported by Kahle and Mellinger[8] in a study of 38 patients.

The treatment of urethral calculi differs in various parts of the world. In China, it is reported, a mixture of walnut kernels, crystallized cane sugar, and sesame oil is used to dissolve the stones.[9] Dilute hydrochloric acid, citric acid, chelating agent EDTA, hemiacidrin,[10] and sodium hexametaphosphate[11] have all been used to disintegrate urinary calculi. Surgical removal of the stones by one of several procedures is the recommended treatment. These procedures are as follows: (1) pushing the stone into the bladder and removing it by an endoscopic method, (2) occluding the urethra in the region proximal to the stone and distending the distal urethra by irrigation,[5] (3) extracting the stone by means of a hemostat, if possible,[12] (4) milking the stone downward and out of the urethra, (5) performing a suprapubic cystolithotomy for removal of the stone in the prostatic urethra,[8] (6) removing the calculus by means of the Johnson stone basket,[1] and (7) performing a urethrolithotomy. The last-named procedure was used in the case discussed below.

Report of Case

A 78-year-old white man, with a psychiatric diagnosis of hebephrenic schizophrenia, who was somewhat out of touch with reality and expressed himself with difficulty, was admitted to the surgical building of St. Elizabeths Hospital in August 1962 because of a large mass on his penis. The patient complained of pain over the mass but denied having dysuria, frequency, urgency, or any other genitourinary symptom. The history revealed that a diagnosis of urethral calculus had been made in April 1951. The patient had had no symptoms at that time and had refused to undergo surgery.

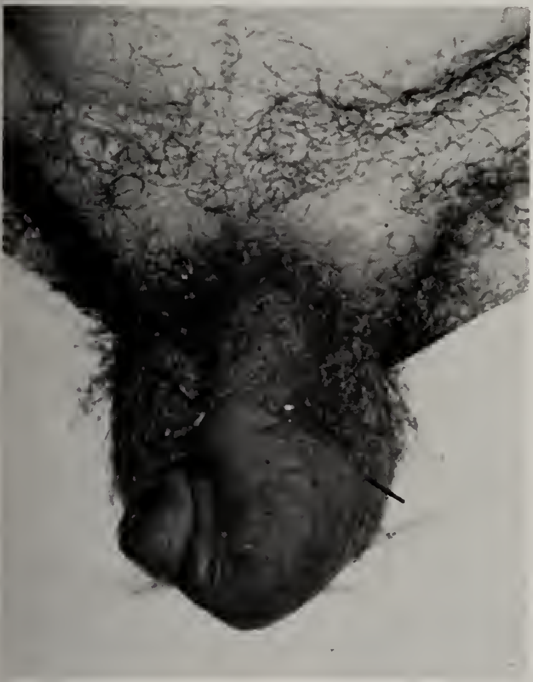

FIG. 1. Genital organ showing deformity of penis prior to operation.

The only abnormalities found were in the external genitalia and the genitourinary tract. The penis was deformed by a large, hard mass just proximal to, and ventral to the glans (figure 1). Ulceration of the skin over this mass appeared to be the cause of the patient's discomfort. Rectal examination indicated that the prostate gland was enlarged. Routine studies of the blood and urine were within normal limits. The blood urea nitrogen was 13 mg. per 100 ml. The serum calcium level was 10 mg. per 100 ml.; the phosphorus level was 3 mg. per 100 ml. A plain roentgenogram of the genital area showed a calcified mass in the penis (figure 2). A sound was passed through the urethra to the mass, and a grating noise was produced. The patient urinated without any difficulty. The results of other preoperative studies, including an intravenous pyelogram, were within normal limits.

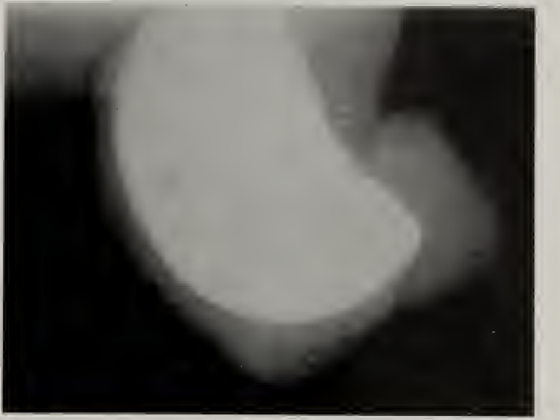

FIG. 2. Roentgenogram showing location of calculus just proximal to glans.

A urethrolithotomy was performed on August 15, 1962, and the stone was removed. The stone measured 7 by 5 by 4 cm. and weighed 13.5 Gm. (figure 3). The urethra was marsupialized because of inflammation and because of the redundancy of the mucosa and overlying skin. A perineal urethrostomy was performed in order to divert the flow of urine. Wet dressings were applied to the penis for several weeks after this procedure in order to reduce the local inflammation. The excessive mucosa was removed on October 9, and the urethra was reconstructed in layers over a no. 18 straight catheter. Cystoscopy and transurethral resection were performed on November 1, 1962 through perineal urethrostomy. The patient tolerated all of the procedures well and was transferred from the surgical building to the psychiatric service in good condition on November 13, 1962 after the perineal incision had healed completely.

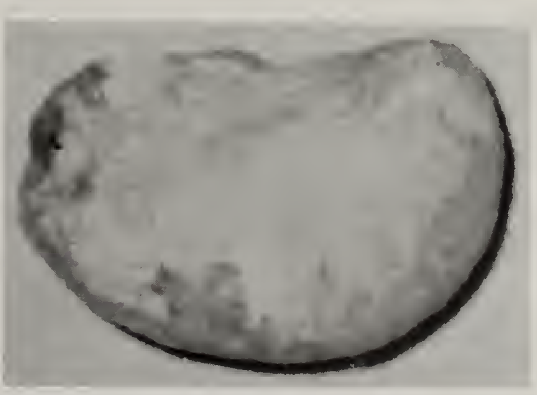

FIG. 3. Urethral calculus measuring 7 by 5 by 4 cm. and weighing 13.5 Gm.

On the follow-up examinations in the surgical clinic the patient has remained asymptomatic (figure 4).

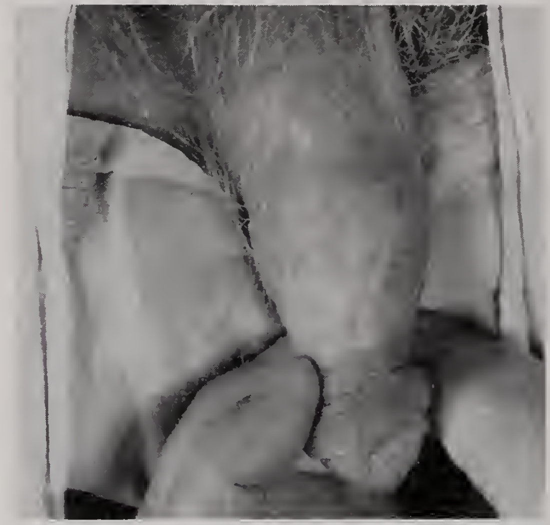

FIG. 4. Genital organ showing complete reconstruction of the penis.

Summary

The largest recorded distal urethral calculus and its surgical treatment has been described, together with a discussion of the characteristics and pathogenesis of these urethral stones. The outstanding facts in this instance were the verified long-standing duration of the stone and the apparent paucity of symptoms.

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A Decade of Durham*

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It is now almost a decade since the Durham opinion was handed down by the United States Court of Appeals of the District of Columbia. In that period much has happened to test what has come to be known as the Durham Rule. A bibliography of the articles in law journals, psychiatric journals, journals of social studies, penology, criminology and religion, magazines of public opinion and popular magazines, all dealing with Durham, would fill many pages. Where not simply explaining the Rule, such articles include suggestions for improvement, alteration, modification, substitution and outright abandonment. Nor have statistical studies been wanting to demonstrate the quantitative effects of this pioneering decision in the area of forensic psychiatry. And, as statistics are generally made to do, each case "proves" its point, pro or con.[1-5]

All of these studies and observations have been carefully observed by the rest of the country, which, in this respect, has made the District of Columbia a sort of goldfish bowl. And, although there is no evidence that the states are rushing to abandon their present legal standards of "insanity" in favor of the Durham Rule, or even some similar opinion or legislation, there are indications that here and there some consideration is being given to the adoption of at least a Durham-like type of approach.[2] And, even where there has been formal rejection of Durham, the mere fact of the issue having been raised of replacing M'Naghten by a more modern standard has of itself been a step toward a newer approach.

Here, in the District of Columbia, Durham has not been unanimously received. Its fundamental philosophy has been attacked, its practical application has been questioned, and several attempts have been made to modify it.[3, 4, 5] The end is not yet, and it is not at all improbable that some statutory modification of the Rule may occur.[6] (The Durham Rule is not a piece of legislation, but an opinion by the Court of Appeals which, superseding previous opinions, becomes the "rule.")

At Saint Elizabeths Hospital the direct effects of the Durham Rule in its various ramifications have been felt from its very inception in July 1954, and the varied and changing consequences of the Rule continue to have their impact on the Hospital in a number of ways. From Monte Durham himself, who has achieved a dubious sort of fame in lending his name to the opinion, down to the most recent beneficiaries of the Rule, the Hospital has been intimately involved with the numerous elaborations, emendations, explanations, and interpolations of the Durham Rule. Indeed, almost every opinion that has been handed down since Durham itself that involved the Rule has been in connection with an appellant or appellee who has at one time or another been hospitalized at Saint Elizabeths Hospital.

The effects of the Rule as seen in the Hospital have, however, not been merely quantitative or statistical. They have been qualitative as well and have involved changes in management and in diagnostic, therapeutic, and prognostic thinking. These changes have been gradual and sometimes subtle, but they have been real, though often intangible. In short, the repercussions of a decade of Durham on the Hospital have been both quantitatively and qualitatively significant. We wish here to discuss only 2 of many of such results of Durham.

Perhaps the most obvious effect of this impact is the increase in the number of criminally committed patients per given period of time. Prior to Durham the average monthly rate of admissions to the Maximum Security Division of the Hospital was 10 to 12. Since Durham the number of admissions of such patients has gradually increased to between 35 and 40 per month. Although this number includes patients who are serving sentences, sexual psychopaths (who are admitted under specific statutes) and persons in certain other categories, the majority of admissions are persons committed for pre-trial observation and a substantial number who have been tried and found "not guilty by reason of insanity."

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* The views expressed are those of the author and not necessarily those of the United States Department of Health, Education, and Welfare.

Related to this increase in numbers is a change of a qualitative kind, a change in the diagnostic character of patients being admitted. This change is a direct product of the Durham Rule, as will be seen from the following analysis of the purpose of the Rule.

What the Durham Rule has done is simply to expand the legal test for mental illness. Prior to Durham the legal standard for mental illness was the old M'Naghten "right and wrong" concept, supplemented by the irresistible impulse test. Durham went far beyond these narrow confines. Thus, "We find that as an exclusive criterion the right-wrong test is inadequate. . . . We find that the 'irresistible impulse' test is also inadequate. . . . We conclude that a broader test should be adopted. . . . The rule we now hold . . . is simply that an accused is not criminally responsible if his unlawful act was the product of mental disease or mental defect."[7] At this time we will not discuss the "product" problem.

Thus, no specific criteria for the legal definition of mental illness were set up as guidelines to the court, jury, or psychiatrist; as to what constitutes mental illness, the criteria for any given case depended entirely on the psychiatrist who was testifying. What the psychiatrist said, if unopposed and if accepted by the jury (or the judge sitting as jury), so long as he said it was mental illness, was the test.

Under these circumstances what constitutes "mental disease or mental defect" depends on the particular psychiatric philosophy of the psychiatrist. And, not infrequently, such a philosophy tends to reflect the climate of psychiatric thinking in the jurisdiction. Of course, as indicated above, the jury is free to accept or reject the psychiatrists' testimony. The significant point to be stressed is that the psychiatrist is not limited to "right and wrong," "irresistible impulse," or any other specific legal definitions of mental illness.

From 1954 to 1957 the number of persons using the insanity defense and the resulting acquittals by reason of insanity increased slowly. Then, in 1959 occurred what is commonly referred to as the "big switch." Somewhat analogous to the way in which the judges in England were questioned following the M'Naghten trial (when they produced what is now known as the M'Naghten Rule), the Superintendent and Assistant Superintendent of Saint Elizabeths Hospital, then Dr. Winfred Overholser and Dr. Addision M. Duval, were interrogated in the United States District Court for the District of Columbia in connection with a trial then in progress as to whether or not sociopathic personality disturbance was in fact a mental illness. Until that time, when a patient was so diagnosed at Saint Elizabeths Hospital, there was appended to the diagnosis the phrase "without mental disorder." Drs. Overholser and Duval testified, in effect, that whether sociopathy was or was not considered a mental illness depended on the case under consideration and the opinion of the psychiatrist involved.

The door was thus opened, in effect, to other personality disorders to be similarly considered; particularly so, since criminal recidivism is a very common symptom in a large number of sociopaths and other categories of personality disturbances. An increased number of defendants were now asking for, and receiving, hospitalization for mental observation. A correspondingly large proportion of this group was being diagnosed in the personality disorder group, and a high proportion of these was being returned to the hospital as not guilty by reason of insanity.

Quite recently, and consonant with this trend, an increasing number of drug addicts have been admitted to the Hospital in connection with charges of violation of the Uniform Narcotic Law. The argument is advanced that the addict, by reason of his addiction, is mentally ill since he is under compulsion to commit the various criminal offenses in order to maintain his addiction. Many of these people are found to be suffering from personality disorders.

It is obvious from the foregoing discussion that an increasing number of persons with personality disorders are occupying hospital beds, and that this is a direct result of the Durham Rule. It follows that psychiatric management of a progressively increasing number of patients with personality disorders requires appropriate modification from a program that has hitherto been designed principally for the treatment of persons suffering from acute and chronic psychoses. With the changing character of patients it has been necessary, *pari passu*, to modify the therapeutic milieu. It is not intended here to give a detailed description of such a program but to emphasize the impact of Durham on the Hospital.

There is another, more subtle, effect of Durham. This is the matter of diagnosis itself. In clinical practice, private or institutional, the nosologic category of a patient is of secondary importante to the question of whether he needs help, whether he requires inpatient or outpatient care, whether he requires occasional supportive therapy or intensive, investigative therapy. Not so with the psychiatrist in court, since he is there required to answer squarely and cateogrically whether, in his opinion, the defendant is or is not suffering from "mental disease." It is argued that the psychiatrist's proper function in court is to provide the history and dynamics of the accused and let the jury judge whether the accused is mentally ill. This is a point well taken, but 2 considerations must be borne in mind. Whatever the testimony of the psychiatrist, he will have previously determined in his own mind whether the defendant is suffering from a mental illness, and his testimony will inevitably be "slanted" to lead the jury to the same conclusions as his own. The other fact to be considered is the very practical one that, as Judge Burger has pointed out, "In the courtroom the psychiatrist is largely at the mercy of the trial counsel."[8] That is, the psychiatrist is asked directly what, in his opinion, the accused is suffering from, and whether this is or is not a mental illness.

The psychiatrist in court is thus called upon to formulate opinions within a very different context from that of the psychiatric clinician. Under the right-wrong test this is a relatively simple matter; under Durham the expression of such an opinion is fraught with far more significance, and far more enters into the formulation of such an opinion than capacity for knowledge of right and wrong. Even the court has come to recognize the gravity of this problem. "What psychiatrists may consider a 'mental disease or defect' for clinical purposes, where their concern is treatment, may or may not be the same as mental disease or defect for the jury's purpose in determining criminal responsibility."[9]

What is thus involved here is a rethinking of the very concept of mental illness, particularly in terms of criminal culpability. The psychiatrist is required to make distinctions with a nicety that is rarely required in his clinical work.

So far as textbook psychoses and neuroses are concerned, the problems, although they still exist (in terms of criminal responsibility, that is) are relatively simple. But what of the personality disorders? Who is so suffering and who is not? And if the defendant "has" a personality disorder, is he mentally ill? And if there are gradations of severity ranging from "without mental disorder" to mental disorder, where is the line of distinction? A recent case in point will indicate the state of this far-from-unanimous approach. In a recent habeas corpus hearing 2 psychiatrists gave almost identical testimony as to the personality of the petitioner; both testified that the prognosis for any kind of a satisfactory adjustment in the community was very poor; both, in fact, testified that the petitioner was suffering from sociopathic personality disturbance. The only difference in their testimony was that 1 said the petitioner was suffering from a mental illness (by reason of his being a sociopath) and the other said he was not.

This is by no means an isolated or unusual situation. It is, in fact, being faced almost daily at Saint Elizabeths Hospital. Where, prior to Durham the basis for pre-trial examination was either prima facie evidence of a mental illness or a well-documented history thereof, under Durham "some evidence" is sufficient, and a mere "scintilla" may be found to be the basis for an acquittal by reason of insanity.

It has been stated that the purpose of the Durham Rule was to make people think. That it has succeeded in this respect cannot be doubted. It has, however, done more. It has made many rethink, because old ideas, conventional attitudes, traditional approaches are no longer tenable. Saint Elizabeths Hospital is fortunate to be so intimately related to the evolution and development of new concepts and practices.

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PRESIDENT'S PAGE

QUO VADIS?

A RECENT HURRIED VISITOR to the Capital City decided to engage one of the local cabdrivers to help him cover the principal sights in the least possible time. Perhaps he knew that cabdrivers generally are abreast of current events (and this is true of those in Washington, D. C.), and they often are highly acute in their analyses of sociopolitical trends. Anyhow, this sightseer and his guide arrived at the edifice known as the National Archives Building, upon the front of which is graven the motto: "What Is Past Is Prologue." Asked to interpret this, the cabdriver promptly rejoined: "Mister, that means you ain't seen nothing yet."

Remember Saskatchewan! That situation is not settled, and the end is not in sight. A recapitulation of the background and subsequent events produces some highly intriguing analogies to our present situation.

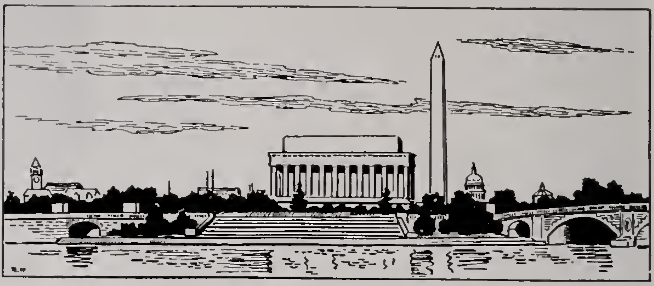
Before the Socialist Government of Saskatchewan passed the Medical Care Insurance Act of 1961 well over two-thirds of the population of that Province were covered by some type of major comprehensive medical care insurance, and annually the numbers were increasing rapidly. Most people were subscribers to doctor-sponsored voluntary plans of the Blue Shield type, while commercial insurance carriers had many individual and company contracts in the Province. There was medical care coverage for veterans and Indians. Thousands were protected by public welfare plans sponsored by one level of Government or another. The Government-operated Workmen's Compensation Board covered that special field completely. There was free treatment for tuberculosis and mental illness; there was provision for treatment of venereal disease and poliomyelitis and free diagnostic services and radiotherapy for all cancer cases.

In the face of the foregoing, the first step of the Socialist Government was the adoption of a Province-wide hospital insurance plan which was compulsory for all residents. As time passed this plan was expanded step by step until it meant total budgetary control of all hospitals by government agency. This trend led to the drastic 1961 Act, which was calculated to finish off finally free medical practice in 1962.

The radical elements responsible for these maneuvers are not affected nor deterred by obvious disapproval expressed by political failures when they campaign on the issue of their medical care plans. What manner of men are these? They cannot justify their wild-eyed push for radical change, so, as in Saskatchewan, they crank out propaganda from huge and efficient publicity departments. In accents shrill they demand that the young working man assume the burden of government inefficiency in caring medically for the needy aged through expansion of Social Security.

No one shall be abandoned. Change will come and we in medicine will change with it. But must we abruptly discard all the efforts of at least a generation for the sordid product of radical socialism? At this rate these extremists have their sights set on a political state far beyond destruction of free medicine.

RLCorley



EDITORIALS

The Dying Patient[*]

What can the physician do to help his dying patient? Since patients vary in their responses to imminent death and since the responses of a specific patient may vary during the course of his disease, the physician needs an assay of the patient's strengths of personality and his previous use of denial and a careful continuing evaluation and reëvaluation of the status of his interpersonal relationships. To make proper use of his observations, the physician should understand his own attitudes toward deception and death and the extent to which the death of a patient threatens his adequacy as a physician. The physician also may have to recognize and, if necessary, temper biases or value judgments that associate "strength" with "realism" or that indicate an arbitrary course applicable to all.

Even if we can counteract our irrational attitudes the limitations of our diagnostic ability as well as of our right to make significant decisions for others may make it wisest for the patient to be given the opportunity to make his own choice. I do not mean simply to say nothing until the patient specifically asks about his diagnosis or prognosis and then to tell him the facts, but rather to give the patient from the outset an opportunity to select denial or acceptance according to his readiness at that particular time. I suspect that it is possible to inform a patient of the serious nature of his illness and at the same time to couch the concern for the future in terms which indicate confidence as well as apprehension, so that the patient can choose, then and later, whether or not to face death.

For example, the patient is now apprehensively awaiting the surgeon's first postoperative visit. Although he hopes for the contrary, he suspects that he has cancer. The surgeon has discovered an inoperable malignant lesion. Suppose the surgeon says to him, adapting his vocabulary to the patient's medical sophistication: "Mr. X, as I know you anticipated, we found a cancer. We did our best to remove all of it, but in situations of this type we can never be absolutely sure. Although we are optimistic about your future, you should nevertheless consider that there remains a possibility of a recurrence and even a fatal outcome. For the time being, I suspect that you had better arrange things so you will be carrying somewhat less responsibility. You have had a good deal of surgical work done and with the side-effects of the radiation we will have to give you for your fullest protection, you will need all your strength for some time to take care of your physical health."

An approach of this type makes denial possible for the patient who needs to deny and at the same time paves the way for acceptance if he is prepared to accept. The patient who needs to deny can believe the optimistic side of the surgeon's statement and still can put his affairs in order on the basis of a prudent consideration for future misadventure, as he would before going into military combat. He can take appropriate action and still reserve his own secret or open conviction that he is destined to survive. He may even need to believe in his survival in order to put his affairs in order; otherwise, he may interpret each

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[*] The above, reprinted by permission, is part of an original article by Aldrich, C. K.: J.A.M.A., 1963, 184, 329; the references which follow are those which were appended to the original article.

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

step in the disposition of his responsibilities or his property as a step propelling him in the direction of death and so avoid taking any steps. At the same time the situation is recognized as serious by patient, physician, and family, and so there is no need for anyone involved to act as if the illness were trivial.

Maintenance of the patient's conviction of potential survival requires the active interest of the physician who continues to see him regularly on rounds and continues to be concerned about his future. Meanwhile, a psychotherapeutic approach to the patient's unresolved problems can be carried out, but without necessarily having as its goal the acceptance of death before the patient is ready to give up his defenses spontaneously.

C. Knight Aldrich, M.D.

950 East 59th Street
Chicago, Ill.

INSTITUTE SPEAKERS: Dr. Jack Kleh (left) and Dr. John M. Evans, members of the Washington Heart Association Board of Directors, addressed the first Institute for Practical Nurses which was sponsored by the Association at the Presidential Arms, June 5. Dr. Kleh is Chairman of its Community Service Committee. Both physicians are members of the staff of George Washington University Hospital. Some 350 persons attended the Institute.

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The ASA Program—Second Day Features

It is appropriate that the Medical Society of D. C., always a leader in medical affairs, is leaving the scientific for the socioeconomic during the Annual Assembly in November. Under the deft leadership of Dr. Donald Stubbs, Tuesday morning is to be devoted to "Who Is to Control Medicine—Doctors, Hospitals, Consumer, or Government?"

The panelists represent the most articulate and knowledgeable individuals in their areas of interest. C. Manton Eddy, Senior Vice President of Connecticut General Life Insurance Company and Chairman of the Health Insurance Council, is recognized as the leading spokesman for the private insurance industry. Kenneth Williamson, Associate Director of the American Hospital Association, needs no introduction to Washingtonians, and Jerome Pollack, Professor of Administrative Medicine at Columbia University, who represents the interest of the consumer, always has a stimulating message. The Government's position will be offered by Dr. William H. Stewart, representing Secretary Celebrezze of the Department of Health, Education, and Welfare.

A well attended, exciting session is assured. (J. J. F.)

The present-day problems inherent in research and development, testing and the introduction of new drugs are of importance to every practicing physician. These problems have recently received widespread publicity, culminating in significant changes in the Food and Drug Administration's drug regulations. A panel of guests who represent various groups intimately associated with these problems have been invited to participate in a symposium entitled, "Drugs and the Physician." This symposium will constitute the afternoon program for the second day of the Assembly.

Representing the Government will be Mr. George Larrick, Commissioner of the Food and Drug Administration; representing the pharmaceutical industry, Dr. Austin Smith, President of the Pharmaceutical Manufacturers' Association; representing the American Medical Association, Dr. Hugh H. Hussey, Director of the Scientific Activities Division. Dr. John H. Moyer, Professor of Medicine, Hahnemann Medical College, will represent the clinical investigator, and Dr. R. Blackwell Smith, Jr., President of the Medical College of Virginia, will act as moderator. Each participant will discuss these problems from his own viewpoint. A panel discussion will follow, attempting to crystallize the important aspects of the drug problem as they affect the physician not only as a practitioner but as a possible clinical investigator. (H. E. T.)

James J. Feffer, M.D.
Howard E. Ticktin, M.D.
Members, Program Committee,
Annual Scientific Assembly

Professional Liability

Premiums for professional liability insurance coverage have increased to a substantial figure, and some attorneys brag about the large amounts juries have awarded their clients against practicing physicians. The reasons for this are complex but include the devaluation of the dollar and the demand for perfection after treatment of injury or disease. Prior to the introduction of the X-ray for the study of fractures patients were satisfied with a painless, useful extremity, but today unless X-ray discloses perfect anatomic adjustment the doctor may have to answer in court as to why perfect alignment was not obtained.

Complications after injury or disease are now blamed on the doctor. Formerly the doctor had to obey 3 precepts in order to avoid conviction for malpractice:

1. Sufficient knowledge and skill (his work should compare favorably with the average doctor in a similar locality).
2. Due diligence (the doctor must observe his case frequently enough).
3. Best judgment (the doctor must be free from drugs, alcohol or mental infirmity when prescribing for the patient).

The possibilities of a lawsuit may prevent a doctor who witnesses an automobile accident from rendering first aid, and may also prevent a doctor from administering heroic medication in cases of impending death because other doctors in the community might not prescribe similar treatment.

The doctor who was the former judge of his own capabilities may be sued for not sending his patient to a specialist if serious complications should develop. He may be held responsible for a mistake of a nurse or an intern during his treatment of a patient under certain circumstances.

To paraphrase Gilbert and Sullivan, "The doctor's life is not a happy one" anymore. If a subpoena is handed to you some day to answer a charge of malpractice you should notify your insurer at once and refrain from discussing the case with anyone except the attorney for the insurance company. You should supply him with the history and progress notes concerning the case. (It is most important that careful, explicit notes have been made, because these are essential at this point, but don't add any notes after a suit has been filed!) The lawyers on both sides will confer and decide that the case is without merit, should be compromised, or that it will be tried in court. If trial is the choice, you will confer with your insurance company lawyer, explain to him your side of the controversy, and familiarize him with the facts as you understand them. Do not panic. Newspaper publicity is not necessarily to your disadvantage. Your patients and your friends become greater admirers of you overnight, and those who were previously unfriendly will continue to be so anyway.

The time of the trial arrives. Be prompt in attendance. Your dress should be conservative and your manner dignified. Respect the judge and all the lawyers, who, after all, are officers of the Court. When you are called to the stand repeat to yourself that you are to discuss your business to which you have devoted your life, whereas the opposing lawyer has studied a few facts about this case but may not possess the background to prepare him to fully understand them.

Answer the questions of your attorney by a simple yes or no if possible, because everything you say can be used as ammunition for the other side on cross examination. The less you say, the more you increase the respect of the jurors. Modesty, deliberation and positiveness should characterize your appearance on the witness stand. Have your medical records on the case in your hand and refer to them for precision. You will probably be allowed to read the history of the case and the treatment aloud.

The discomfort of cross examination will depend upon what has gone on since you began to testify. If you have been truthful, brief, and straightforward and have treated your patient to the best of your ability, you can be confident that the opposing lawyer cannot make many inroads in your testimony; but if you have omitted facts which were not in your favor or if you have been guilty of garrulousness which included damaging statements—Look Out! The experienced trial lawyer will use these things to prove that you are not only dishonest but that you were careless and ignorant and that your omission to state all the facts puts you next to Ananias.

The belligerent, insulting, sneering lawyer who attacks you is storing up sentiment in your favor with the jury, which unconsciously favors the underdog. Keep your temper under these circumstances and make your politeness contrast with his rudeness.

If the trial has proven that you were guilty of an error in judgment, the jury may conclude that everyone is entitled to one honest mistake and render a verdict in your favor.

James A. Gannon, Sr., M.D.

Assembly Attendance Is a Must

The functions of the Public Relations Committee of the Annual Scientific Assembly are interesting and multiple. A successful Assembly is a well attended one. To be well attended the scientific program must be attractive and appeal to a cross-section of the medical and allied population of the community. The program then has to be publicized to the physicians in the area.

Notification of the Assembly appears in each mailing of the Medical Society and appears on the cover of the Annals every month. Posters will be displayed in all of the area hospitals at appropriate intervals. Chiefs of various services in schools and hospitals will be asked to inform their staffs about the Assembly and to curtail their own activities during the meeting. Cards designed to be placed in reception rooms will announce that "Your Doctor will attend the Annual Scientific Assembly, November 18, 19 and 20 so that he may better serve you." Our office assistants will have their own annual dinner publicized. This action will also help stimulate interest and attendance.

The preceding briefly discusses our role with physicians. Our status with the public may also be enhanced by good attendance at a Scientific Assembly. The basis for modern P-R technique is to emphasize that physicians are interested, first, in their patient's welfare. It is important for the public to recognize that the Medical Society of the District of Columbia has an annual modern Scientific Assembly; area physicians attend their Assembly; their own physicians learn new theories and skills in order to serve their patients more effectively.

This is where news media help. All area science writers and those in similar capacities with radio and TV are invited to a briefing luncheon prior to the Assembly. They will attend the sessions prepared to disseminate the information to the public. A press room equipped with telephones, programs and other paraphernalia will be available and staffed by a member of the Committee. The Committee plans to have one or more interviews on TV and radio with officials of the Medical Society and the Chairman of the Assembly prior to and during the sessions.

It is hoped that this multiple attack will help stimulate a well attended and successful Annual Assembly both as a scientific and a community project.

Paul R. Wilner, M.D.
Chairman, Committee on Public Relations, Annual Scientific Assembly

Clinical Center Studies of Endocrine Disorders

The coöperation of physicians is requested in some studies being conducted at the Clinical Center by the Endocrinology Branch of the National Cancer Institute.

Referrals of the following groups of patients are needed for study and treatment: women with primary amenorrhea, untreated acromegalics, children with disorders of sexual development, and men with carcinoma of the breast.

Physicians interested in having their patients considered for admission to these studies should write or telephone Dr. Mortimer B. Lipsett, National Cancer Institute, Bethesda 14, Md.; telephone: 49-65241 (Area Code 301).

Report of Delegates to AMA House of Delegates

The House of Delegates of the American Medical Association, at the Annual Meeting, June 16–20, 1963, in Atlantic City, N. J., considered many items of business. Several of the more important ones will be the subject of this report.

Report of Education and Research Foundation

In keeping with the effort to improve the scientific image of the Association, the House approved the report of the Education and Research Foundation that it establish a new Institute for Biomedical Research. This Institute will be dedicated to pure, basic nondisease-oriented research and will concern itself with intensive and fundamental study of life processes particularly as related to intracellular elements. It will not render medical service to patients and will not conduct a graduate training program leading to a degree. The details of the Institute will be published in the *Journal*.

Other activities of the Education and Research Foundation are: (1) the financial support of medical schools, (2) the Loan Guarantee Program for medical students, (3) the establishment of research grants, and (4) research in medical journalism. The most impressive of these is the Loan Program since it was brought out that 1 out of every 10 medical students has availed himself of the opportunity offered by it.

Amendments to Constitution

Amendments to the Constitution and By-laws were adopted which increase the size of the Board of Trustees from 11 to 15 members by adding 3 elected trustees and including the immediate Past President for a 1-year term. The elected trustees will serve terms of 3 years and are limited to a maximum of 3 terms, or a total of 9 years' service. The change was made with the hope that it would improve communication between the Board and the Association and would be consistent with the increase in the size of the Association, now over 200,000 members, and with the increase in the size of the House of Delegates, now 226 members.

In considering the reports relative to the Sections and Scientific Program the House disagreed with some recommendations in each report. Its final decision was that all Section officers—chairman, vice chairman, delegate, alternate delegate, secretary, assistant secretary, and representative to the scientific exhibit—should be elected by the members of the Section and that no officer be appointed by the AMA Board of Trustees. It approved the recommendation that the committee of the Council on Scientific Assembly of the appropriate Section shall nominate the AMA representatives to serve on the medical specialty certifying board.

It further decided that a member of a Section who desires to change his registration from one Section to another because of a change in his specialty be required to inform AMA Headquarters by written notice of this intention at least 60 days in advance of the Annual Meeting.

The Board of Trustees was complimented for and directed to implement its recommendation that a national forum be sponsored by AMA in which representatives of the national medical specialty societies and the Academy of General Practice will participate.

Compensation of House Officers

The House disapproved the report of the Council on Medical Service and the Council on Medical Education and Hospitals relative to the compensation of house officers. Your delegates could not object to the report of the reference committee which recommended this action for the reasons pointed out, that great divergence of opinion still existed in this matter together with the fact that the matter had never been presented to the Law Department and Judicial Council for study and opinion.

However, your delegates objected vehemently to an amendment to the report introduced on the floor by the New Jersey delegation and which was adopted by a vote of 96 to 87. The amendment reads: "We therefore recommend that in view of the overwhelming opposition contained in the report of the Council on Medical Service and the Council on Medical Education and Hospitals, the AMA record itself as opposed to any system or program by which any part of an intern's or resident's salary is paid out of fees collected by the attending physician or out of fees collected under any type of medical-surgical insurance coverage."

Your delegates are of the opinion that this amendment should be rescinded because it is completely unrealistic since 30 per cent of programs are presently financed, at least in part, in this fashion; it is restrictive in that it limits the manner in which a physician may dispose of money derived from fees which he has earned and collected ethically; and it is unenforceable. Furthermore, the amendment was not presented for consideration and opinion to the Law Department or the Judicial Council as is proposed for future recommendations on the subject of resident and intern compensation and which certainly should have been done.

In another action, related to the controversial "25 per cent rule," the House approved a Revision of the Essentials of an Approved Internship which deletes the requirement for any stated proportion of foreign medical graduates and graduates of American and/or Canadian medical schools as an essential feature of an internship program.

Benefits to the Aged

The House adopted a resolution to the effect that the AMA favors the enactment by Congress of an act amending the Internal Revenue Code to provide the following:

1. Tax incentives for those citizens who have reached 65 and are able to provide voluntary health insurance for themselves, and
2. Tax incentives for relatives or former employers who are able to provide insurance for these people.

Physicians' Retirement Plan

Of interest to all practicing physicians was the approval by the House of the establishment of an AMA physicians' pension plan under provision of the Self-employed Individuals Retirement Act of 1962 (Public Law 87-792—the Keogh Law). The Board of Trustees is to make every effort to begin operation of the plan before the end of 1963. The Ad Hoc Committee on the Keogh Act and Related Problems of this Society should be cognizant of this.

Miscellaneous Actions

The House agreed with the Board of Trustees that the AMA should defer any definitive statement regarding the relationship between tobacco and disease in view of the continuing study and research taking place on this subject.

A number of other actions taken by the House are of particular interest:

Recommended that local medical societies in the vicinity of medical schools assume the responsibility of establishing and maintaining clear lines of communication with medical students.

Approved the organization of a new National Council for the Accreditation of Nursing Homes, jointly sponsored by the AMA and the American Nursing Home Association.

Adopted the recommendations of the Committee to Study the Joint Commission on the Accreditation of Hospitals and suggested that the Committee's report be distributed to constituent and component societies and hospital chiefs of staff.

Approved an alteration in the Association By-laws which states: "The Council on Medical Education and Hospitals shall consist of 10 Active or Service members, at least 1 of whom shall be a private practitioner of medicine who is not a faculty member of a medical school nor a member of a staff of a hospital associated with a medical school or university."

Commended the American Farm Bureau for its vigorous leadership in opposing unwarranted government interference and regulation.

Urged the widest dissemination to AMA members of a joint report by the AMA Council on Mental Health and the National Academy of Sciences-National Research Council on The Use of Narcotic Drugs in Medical Practice and the Medical Management of Narcotic Addicts.

Recommended that all AMA members and affiliates give strong support to the national tuberculin testing campaign proposed by the American School Health Association. Dr. J. Winthrop Peabody, Sr., of Washington, delegate from the AMA Section on Diseases of the Chest, on June 17 introduced the resolution to the House which urged this support.

Directed the Speaker of the House to appoint an ad hoc committee to study the size, make-up and functions of the House of Delegates, its councils, sections and committees, and to report its findings in June, 1964.

As is widely known by now, the House by acclamation elected Dr. Norman A. Welch President-elect to become President at the Annual Meeting in San Francisco in June 1964. Dr. Welch has been a member of the House of Delegates since 1951 and its Speaker since 1959.

Respectfully submitted,
Raymond T. Holden, M.D.,
Delegate
C. Willard Camalier, Jr., M.D.,
Delegate

Annual Report on Administrative Services of Medical Service*

IN THE YEAR 1962, Medical Service of the District of Columbia made impressive gains in the number of subscribers enrolled and the amounts paid to physicians.

Finances

During 1962 Medical Service paid out $19,544,000 to physicians for services rendered its subscribers, an amount which would provide each Participating Physician with a payment of more than $6,900. Also, during the year, Medical Service added $804,000 to reserves, to establish a total reserve of $5,073,000, or 2.9 months of claims and operating expense. In addition to the amounts added to reserves from subscription income, we have received substantial income from investments made under the direction of the Finance Committee. For your information I should like to take this opportunity to provide you with a comparison of the balance sheet of Medical Service as of December 31, 1961 and December 31, 1962, as follows:

	1961	1962	Increase
TOTAL ASSETS	$11,300,517.80	$12,835,919.98	$1,535,402.18
Total Liabilities	7,031,079.66	7,762,806.97	731,727.31
Reserve for Medical Service	4,269,438.14	5,073,113.01	803,674.87
TOTAL LIABILITIES AND RESERVES	$11,300,517.80	$12,835,919.98	$1,535,402.18

Our comparative operating statements for 1961 and 1962 are as follows:

	1961	1962	Increase
INCOME:			
Earned Subscription Charges	$19,492,774.58	$21,581,809.69	$2,089,035.11
Income from Investments	123,348.83	187,202.70	63,853.87
TOTAL INCOME	$19,616,123.41	$21,769,012.39	$2,152,888.98

	1961	1962	Increase
EXPENSES:			
Claims	$17,193,125.36	$19,544,270.95	$2,351,145.59
Operating Expense	1,144,629.76	1,441,066.47	296,436.71
TOTAL EXPENSE	$18,337,755.12	$20,985,337.42	$2,647,582.30
EXCESS OF INCOME OVER EXPENSE	$ 1,278,368.29	$ 803,674.87	$ (474,693.42)

While our additions to reserves were not as great in 1962 as in the preceding several years, Medical Service is in a sound financial position, and our reserve position is becoming more stabilized due to experience rating and rates for the Federal Employee Program which are designed to provide a fixed addition to reserves.

Enrollment

As of December 31, 1962, there were 893,679 persons protected by Medical Service against the cost of medical expense, of which 425,000 were covered under the Federal Employee Program and 469,000 were covered under the Surgical and Surgical-Medical contracts. Enrollment at the end of 1962 represents a gain of 39,500 Participants during the year. In a report presented by the Enrollment Committee of the National Association of Blue Shield Plans, Medical Service was shown to rank fifteenth in total number of persons enrolled, first, in the percentage of population enrolled, and first in the percentage of Federal employees choosing the Service Benefit Plan of Blue Cross and Blue Shield over other available carriers.

Of further interest is the fact that all of the Federal employee subscribers are covered under the Supplemental Benefits Provision of the Federal Employee Contract, and 95,000 persons covered under the Surgical-Medical Contract also have Major Medical coverage to protect them against the more extreme costs of medical care. Thus, about 58 per cent of all subscribers are protected under Major Medical or Supplemental Benefits. Under these types of coverage the amounts paid to physicians through prepayment have increased tremendously and have, in addition, provided a means of payment to physicians whose services are not generally covered under the basic portion of the program.

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* Presented at the Annual Meeting of Participating Physicians of Medical Service of the District of Columbia, May 8, 1963.

Physician Participation

At the present time there are 2,816 physicians participating in the program, an increase of 156 over the same time last year. The continued addition of physicians participating in Medical Service has been encouraging, since it is clearly recognized that Medical Service requires the support of the physicians practicing in the Washington area if it is to represent to the public, with any degree of accuracy, the attitude of most physicians in the area with respect to the financing of medical care.

Agreement with GHI

Under an agreement with Group Hospitalization, Inc. which was revised and brought up to date in June of 1962, the operating functions of Medical Service have been entrusted to GHI. As the agency for Medical Service, GHI handles the administration of our prepayment program, and has served Medical Service well in this respect. In 1962 the Claims Department processed 488,000 claims, 83,000 more than in 1961. The Claims Department is performing effectively, and is to be commended for processing a record 1,935 Medical Service claims each day.

Operating Costs

It has always been the goal of Medical Service and the administrative agency to keep operating costs at a minimum in order that the maximum portion of the subscriber's dollar be reserved for payment of claims and future contingencies. In 1962 operating costs increased from 5.9 to 6.7 per cent of earned subscription income. However, this increase is largely the result of subscribers changing coverage from the Surgical Contract, which generates a minimum number of claims, to the Surgical-Medical Contract, which generates a substantially greater number of claims. Despite these increased operating costs, the operating expense of Medical Service in 1962 was substantially below the average for Blue Shield Plans nationwide.

Summary

In fact, a comparison of enrollment and financial data indicates that Medical Service is in a better position than most Blue Shield Plans with respect to the percentage of the population enrolled, the amount of reserve per contract, and the percentage of income charged to operating expense. We have greatly benefited from, and we are grateful for, the high level of competency which has been demonstrated by our administrative agency, our financial advisors, and the physicians who have devoted so much of their time and interest to the medical problems which occur in the day-to-day operation of Medical Service, and we appreciate your interest in Medical Service as expressed by your presence here tonight.

George B. McGovern
Executive Vice President

Dr. Welch to Head AMA in 1964

Atlantic City, New Jersey, with its briny air-conditioning and famous boardwalk, was an ideal site for the 112th Annual Meeting of the American Medical Association but not entirely because of those two well-known qualifications. Rather the setting is ideal because of the many hotels in close proximity to the large Convention Hall, making it possible for some 37,000 visitors to assemble expeditiously and to attend meetings and exhibits, including the House of Delegates' meetings, without relying on autos or taxis.

Election of officers took place at the final session of the House of Delegates on Thursday morning, June 20. Dr. Norman A. Welch, of Boston, Speaker of the House of Delegates, was elected President-elect. Dr. Walter Judd, former Republican Congressman from Minnesota, was elected to the Judicial Council.

Dr. Edwards R. Annis, of Miami, was installed as the 117th President at inauguration ceremonies, Tuesday evening, in the Ballroom of the Convention Hall.

The opening program was a Medico-Religion Session on Sunday, June 16. The Most Reverend Fulton J. Sheen, Roman Catholic Bishop of New York, and Dr. Edward H. Rynearson, of the Mayo Clinic, Rochester, Minn., the principal speakers, discussed "Physician-Clergy Relationship in the Total Care of the Patient."

The AMA will establish and operate a new

Institute for Biomedical Research. This important announcement was made before the House of Delegates on Monday by Dr. Raymond McKeown, President of the Education and Research Foundation and a member of the Board of Trustees. According to Dr. McKeown, the Institute will be dedicated to pure basic non-disease-oriented research.

Dr. Lester R. Dragstedt, of Gainesville, Fla., Research Professor of Surgery at the University of Florida School of Medicine, was selected by the House of Delegates to receive the 1963 Distinguished Service Award. The award was presented at the Presidential Inauguration Ceremony, June 18.

Dr. H. W. Magoun, Dean of the Graduate Division, University of California at Los Angeles, received the $5,000 Passano Award at a reception and dinner at the Traymore Hotel, June 19. Dr. Magoun was cited for the results of his studies in neurophysiology and anatomy.

In regular attendance at the meetings of the House of Delegates, held at the Traymore Hotel, were the D. C. Medical Society's delegates, Dr. Raymond T. Holden and Dr. C. Willard Camalier, Jr.; also Dr. Edward W. Nicklas, President-elect of the Medical Society; Dr. W. LeRoy Dunn, Chairman of the Executive Board; and George W. Cooley, Secretary. Attending the meeting for part of the week were Charlene Stivala and Dora Caylor, of the Society's office staff, and Louise Eckburg, Assistant Editor of the MEDICAL ANNALS.

Dr. Camalier was a member of the House Reference Committee on Medical Education and Hospitals, to which were referred many controversial items.

A simple and practical means for treatment of kidney failure was explained and demonstrated over "live" closed-circuit color television, relayed to Atlantic City from Philadelphia over private TV facilities. Dr. George E. Schreiner, President of the American Federation for Clinical Research, took part in this program. He was also a moderator, June 18, for Part I of the Third Multiple Discipline Research Forum.

For the third year a functioning clinical pathology laboratory, where all physicians attending the Annual Meeting were invited to avail themselves of appropriate tests, was planned and organized by a committee of pathologists headed by Dr. Thomas M. Peery, Professor of Pathology at George Washington University. Dr. Peery and Dr. William L. Marsh were also in charge of the day-to-day operations of the laboratory.

The D. C. Medical Society was represented in the Scientific Exhibit by 22 exhibitors. Dr. Roland B. Scott and Dr. Angella D. Ferguson, of Howard University College of Medicine and Freedmen's Hospital, received a Certificate of Merit for their exhibit on "The Management of the Child with Sickle Cell Anemia."

Dr. William B. Walsh, President of Project HOPE, addressed the Woman's Auxiliary to the AMA and showed a film depicting the activities of Project HOPE in Peru.

At the opening meeting of the Section on Experimental Medicine and Therapeutics Dr. Laurence H. Kyle presented the George Minot Award to Dr. George W. Thorn, of Boston. Dr. Edward D. Freis read a paper before the Section on "Evaluation of Toxicity of New Drugs in Long Term Clinical Trials."

Dr. Milton L. Goldman, Washington surgeon, again distinguished himself in the Annual Exhibit of the American Physicians' Art Association. His colorful "Pot Bellied Stove" (an egg water color in red and black) was awarded "Best in Show." He also took first prizes in portraits and drawings. Dr. Goldman, who has a bachelor's degree in Fine Arts from American University, has been a prize-winner for a number of years.

The next meeting of the AMA will be its Clinical Session in Portland, Oregon, December 1–4. Convention headquarters will be the new Hilton Hotel. Scientific sessions will convene in the Memorial Colliseum. The next annual meeting will be held in San Francisco, June 21–25, 1964.

Letters to the Editor

Women's Apparel

Woman has 'evolved' toward the 'wearing of pants' and tight brassieres. Many, however, are altering their physiology so that chronic passive congestion, mastitis, pruritis and dermatitis result. This is noted in even the most fastidious.

Return to the characteristic feminine attire of the milleniums has completely relieved many patients who previously have run the therapeutic gamut without improvement.

Is it not time to resist the slavish conformity to style in favor of good judgment in wearing apparel?

Yours very truly,
BERNARD NOTES, M.D.

The Physician's Guide to News Relationships

PAUL R. WILNER, M.D.

Chairman, Committee on Public Information and Education, The Medical Society of the District of Columbia

In 1955 the Committee on Public Information and Education of the Medical Society published "The Physician in Health Education."[1] This was a most informative and helpful article. It is well worth dissemination and rereading by the members of our Society.

However, many recent inquiries from physicians and the news media have pointed out the necessity for a re-statement of our policy. This need has been emphasized because of continued news incidences involving physicians, hospitals and related health agencies.

Our ground rules have been formulated for the protection of the patient. Certain news releases, by involving local physicians, might lead the unindoctrinated patient into a long, tenuous and frequently unsuccessful attempt to solve an unrelated individual problem. Such releases might also produce an undue and unfair burden upon the named physician, who then would be less able to care for other patients. Much of what follows will be quoted from several excellent studies, reports, and accepted tenets of our Society.

By news media a newsman refers to the dissemination of news through all avenues—newspapers, bulletins, journals, radio and television.

A superb "Guide for Physicians, Hospitals and News Media" was published in Wisconsin in 1960 through the coöperation of the Medical Society, the Hospital Associations, and the Radio, TV and Newspaper Association of that state.[2] Some excerpts from it are well worth quoting here:

> "Although physicians and newsmen conduct their respective practices in two quite different spheres, they have a mutual objective in the public good.
>
> "The physician is an individual concerned with an individual. His relationship with the patient is a sensitive, personal one. Whether in health or disease, the patient must receive care to the best of the physician's ability with the highest regard for ethics. The physician makes his decisions within the confines of ethical and professional standards established by his local medical society and the medical staff of the hospital in which he practices.
>
> "The newsman is part of an organization which has the world as its audience. His relationship with the reader is indirect, though often highly influential. The press usually is a corporation, controlled by a board of directors and officers, with numerous departments to carry out its functions. News policies are entrusted to editors.
>
> "The newsman feels keenly the wise latitude given him by the United States Constitution, courts and customs in the name of freedom of the press. While the law holds the press accountable for what it does, there is a strong inclination to the principle that the public has a right to know. After all, vital decisions in a democracy are made by the public."

It is also timely to quote the first 2 principles of the "Canons of Journalism" of the American Society of Newspaper Editors.[3]

> "The primary function of newspapers is to communicate to the human race what its members do, feel, and think. Journalism, therefore, demands of its practitioners the widest range of intelligence, of knowledge, and of experience, as well as natural and trained powers of observation and reasoning. To its opportunities as a chronicle are indissolubly linked its obligations as teacher and interpreter.
>
> "To the end of finding some means of codifying sound practice and just aspirations of American journalism these canons are set forth:
>
> 1. Responsibility
>   The right of a newspaper to attract and hold readers is restricted by nothing but consideration of public welfare. The use a newspaper makes of the share of public attention it gains serves to determine its sense of responsibility, which it shares with every member of its staff. A journalist who uses his power for any selfish or otherwise unworthy purpose is faithless to a high trust.
> 2. Freedom of the press
>   Freedom of the press is to be guarded as a vital right of mankind. It is the unquestionable right to discuss whatever is not explicitly forbidden by law, including the wisdom of any restrictive statute."

Physicians are all aware of the varieties of disease and the variable responses of patients to treatment. We are aware of sensationalism in medical reporting and tend to "play down" the individual physician's role in effecting a cure. Fortunately, there are many examples of great medical discoveries and advances which deserve and receive widespread publicity through all news media. The achievements of White, Waksman, Salk and Wangensteen, as examples, enhance the "image" of American Medicine in the eyes of the public. Such publicity of medical advances is also important for public health, medical school and hospital medical status if it is in the public interest and conforms with the ethical principles which medicine has used to protect the public.

The American Medical Association's "Principles of Medical Ethics"[4] is vital to our present discussion. Certain pertinent sections follow:

> "Chapter I, Section 5 (The Relationship of the Physician to Media of Public Information).
>
> "The medical profession considers it ethical for a physician to meet the request of a component or constituent medical society to write, act or speak for general readers or audiences. On the other hand, it may often happen that the representatives of popular news media are the first to perceive the adaptability of medical material for presentation to the public. In such a situation the physician may be asked to release to the public some information, exhibit, drawing or photograph. Refusal to release this material may be considered a refusal to perform a public service, yet compliance may bring the charge of self-seeking or solicitation.
>
> "An ethical physician may provide appropriate information regarding important medical and public health matters which have been discussed during open medical meetings or in technical papers which have been published and he may reveal information regarding a patient's physical condition if the patient gives his permission, but he should seek the guidance of appropriate officials and designated spokesmen of component or constituent medical societies. Spokesmen should be empowered to give prompt and authoritative replies and a list should be issued which identifies them and discloses the manner in which they may be reached.* These provisions are made with full knowledge that the primary responsibility of the physician is the welfare of his patient but proper observation of these ethical provisions by the physician concerned should protect him from any charge of self-aggrandizement."

The following are excerpts from Opinions and Reports of the Judicial Council of the AMA[5] which are applicable in interpreting Section 10, which has to do with publicity.

> "The Principles of Ethics of the AMA define clearly the methods which are objectionable for physicians to use to bring themselves into the public notice in their endeavor to gain a livelihood. They state clearly the methods by which a man may rise by honorable endeavor to the fame of a well-earned reputation, and suggest the different methods by which a man may gain unsavory notoriety. The standards of the medical profession have always demanded that physicians shall not exploit their ability or achievements to the laity. . . .
>
> * * * * *
>
> "To all questions there are two sides, and we must realize that if the AMA endeavors to arouse in the public an interest in medical matters and increase its knowledge of public health and hygiene, with this increased knowledge will come a demand for more knowledge concerning the various diseases which may be acquired by any individual. The daily press has a right to publish that which is of interest to its readers; hence it has a right to a knowledge of medical matters that shall be accurate and given by honorable men."

The Judicial Council therefore recommended to the House of Delegates the following resolution[6]:

> "It is the sense of the House of Delegates of the AMA that each county society should constitute a publicity committee whose duties shall be to give to the daily press accurate information on all medical matters of interest to the public, that this shall be freely given without the mentioning of names or from whence the information comes, and that this committee shall act in an advisory capacity to all physicians of its society in questions relating to publications other than in the medical press" (1914 report). (Adopted by the House of Delegates)

Harer,[7] in "What Is Ethical Behavior?" concludes his article with these lines:

> ". . . It is completely unnecessary to try to establish specific rules and specific directions for ethical action. In the matter of ethical behavior we must be concerned with principle rather than anything else. All doctors are intelligent, highly educated individuals. As such they know right from wrong. Under unusual circumstances, where the proper course of action is not clearly discernible, a doctor can be sure his actions will be ethical if he follows the precepts of the Golden Rule, the first aphorism and Oath of Hippocrates, and 'lets his conscience be his guide.' "

Good taste, good sense, and an understanding of the pressing and vital importance of medical-public relationships in our present era dictate a mature policy in our empathy with the public, the news media, and with our own colleagues.

References

1. The Physician in Health Education. Med. Ann. D.C., 1955, **24**, 611.
2. A Guide for Physician, Hospital and News Media. A Joint Service Publication of The State Medical Society of Wisconsin, The Hospital Associations of Wisconsin, and the Newspaper, Radio and Television Association of Wisconsin, March, 1960. Madison 1, Wis.: State Medical Society of Wisconsin, Box 1109.
3. Ibid., page 14.
4. Principles of Medical Ethics. J.A.M.A., Special Edition, June 7, 1958.
5. Opinions and Reports of the Judicial Council. Chicago, Ill.: American Medical Association, December, 1960, pp. 74–5.
6. Ibid., p. 76.
7. HARER, W. B.: What Is Ethical Behavior? Med. Ann. D.C., 1961, **30**, 301.

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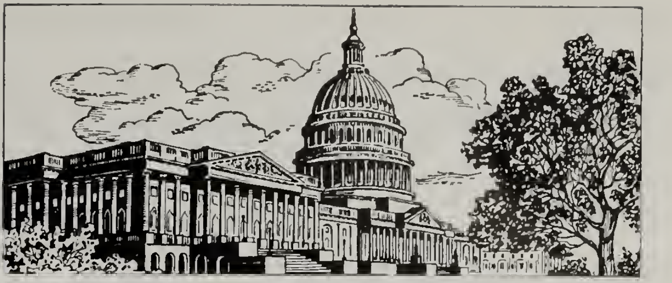
* The Medical Society of the District of Columbia makes such a list available to the news media and revises it annually.



NEWS & PERSONALS

Boards & Committees

The regular meeting of the **Executive Board of the Medical Society of D. C.** was held, July 1, in the Society's building at 7:30 p.m. Dr. W. LeRoy Dunn, Chairman, presided. Present were: Drs. Karl C. Corley, Edward W. Nicklas, Victor R. Alfaro, Raymond T. Holden, Duane C. Richtmeyer, J. Rogers Young, Grace H. Guin, C. Willard Camalier, Jr., and Mr. George Cooley, Secretary.

Committee Meetings

The following Committees were reported to have met since the last meeting of the Executive Board:

May 28	Committee on Public Health
June 5	House Committee
7	Review Board for Prepaid Medical Care Benefits
12	Board of Credentials
25	Committee on Mental Health
25	Grievance Committee
28	Cancer Coördinating Group

Finance Committee

The Chairman reported that the decision of the Board, made last December, to reduce the number of pages in the Annals, reduce the size of type, and increase the number of lines per page, had resulted in substantial savings for the first 6 months of 1963. If these savings can be continued for the remainder of the year, a major portion of the deficit will be eliminated.

A report was submitted on the present status of the Bequest Funds. Action was deferred until the next meeting, at which time the Finance Committee is to make recommendations for investing the cash now in savings accounts.

House Committee

Dr. Alfaro reported for the House Committee on its activities in securing bids for this property and possible new sites for a new building. It was voted that the House Committee be authorized to proceed along the lines outlined by the Chairman and to report any final decisions back to the Board.

AMA Annual Session at Atlantic City

The Society's delegates, Drs. Holden and Camalier, presented a full report on this meeting, which is published elsewhere in this issue of the Annals.

Special Report of the Board of Credentials

On recommendation of the Board of Credentials it was voted that in order to increase the number of intern and resident members of the Medical Society, staff lists be obtained from the hospitals to be used for the purpose of sending letters to the residents and interns inviting them to become members of the Society. In addition to the prestige afforded them through membership, they receive a monthly newsletter and other informational material.

Membership

The following applicants recommended by the Board of Credentials were approved for membership in the Society for 1 year pending action by the membership:

Active Members

Sammye A. Belcher, 1417 Shepherd Street, N.W.
Edward Henry Chappelle, Freedmen's Hospital
Francis Paul Chiaramonte, Jr., 5944 28th Street, S.E.
Dorothy Skene Dobbs, St. Elizabeths Hospital
Edward Elias Gahres, 2121 Pennsylvania Avenue, N.W.
John Joseph Gleeson, 2430 Pennsylvania Avenue, N.W.
John Dunham Griswold, 5255 Loughboro Road
William James Jaffurs, Columbia Hospital for Women
Paul Schlein, 1601 18th Street, N.W.

Ralph Weyman Wadeson, Jr., 3000 Connecticut Avenue, N.W.
Harold A. J. Wiedemann, Georgetown University Hospital
Alison Bradley Wilhelm, Georgetown University Hospital

Associate Members

Harold G. Beeson, Department of State
Norman Kay Bohrer, 1650 Portal Drive, N.W.
Matthew Jack Ellenhorn, Food & Drug Administration
Andrew Peter Ferry, Armed Forces Institute of Pathology
Robert Thomas Greenfield, Jr., Ft. Myer, Va.

The following transfer was approved, as recommended by the Board of Credentials: *Associate to Active:* John P. Lindsay.

The following resignations were accepted: *Active:* Eugene R. Atherton, Robert A. Dornbach, Henry D. Lederer, Richard F. Manegold, and H. J. Russell McNitt.

Licensing Qualified Foreign Physicians

The Executive Board considered a request concerning the licensing of foreign physicians who had graduate training in America and who are eminently qualified in their specialties but who cannot, under the present circumstances, obtain licenses in the District. The Chairman was authorized to reply indicating the full sympathy of the Board in regard to such cases but pointing out that this problem is not one in which the Society can become concerned.

Consulting Editor of the Annals

Upon the recommendation of Dr. Wallace M. Yater, Editor, it was voted to approve the appointment of Colonel Joe M. Blumberg, MC, USA, Director of the Armed Forces Institute of Pathology, as Consulting Editor of the Medical Annals, succeeding Colonel Frank M. Townsend, MC, USAF, the former Director, who has received a new assignment.

American Association for the History of Medicine

It was voted that the President appoint a representative of this Society to serve on the Planning Committee for this organization's next annual meeting, which is scheduled for Washington and Bethesda, April 30–May 2, 1964.

Metropolitan Health Facilities Planning Council

The Executive Board approved the President's nomination of Dr. Herbert P. Ramsey to represent the Society on this Planning Council.

Meeting Dates for Future Scientific Assemblies

In an effort to avoid conflict in dates between the Society's Scientific Assembly and major national meetings, the Secretary was requested to review all possible meeting dates for 1965 and 1966 and prepare suggestions for the Executive Board to consider at its next meeting.

The next meeting of the Board was set for July 29, 1963.

General News

The Allergy Foundation of America announces the availability of 4 **postdoctoral fellowships** for intensive and highly specialized advanced training in research and clinical allergy. Candidates must be graduates of approved medical schools and must have completed at least 2 years of hospital internship training. They will divide their time between research work and clinical training in allergy as arranged with the preceptor. The preceptors are: Rudolph L. Baer, M.D., New York University Post-Graduate Medical School; Dan H. Campbell, Ph.D., California Institute of Technology, at Pasadena; Frank J. Dixon, M.D., Scripps Clinic and Research Foundation, at LaJolla, California; and Francis C. Lowell, M.D., Massachusetts General Hospital, Boston.

The stipend for the first year is $5,400; the second year, $6,300. Requests for applications should be sent directly to the Secretary of the Scientific and Educational Council. Allergy Foundation of America, 801 Second Avenue, New York 17, N. Y. Each applicant should indicate which of the fellowships is his first choice.

The Washington Hospital Center inaugurated a **Self-Care Project** facility at the Center, June 17. The unit consists of 26 beds on the second floor of the School of Nursing and is intended for patients who can and want to care for themselves. The charge for a private bedroom with shared bathroom is about half of the charge for a semi-private room in the hospital. Admission is by physician referral only.

Providence Hospital has a self-care unit of semi-private rooms within the hospital. At the

Center this new facility is not a part of the main hospital building but is accessible to the main building by underground passageway in inclement weather.

D. C. General Hospital opened its **new dormitory for interns and residents** on July 1. Built at a cost of $1,200,000, the 8-story building is air-conditioned and includes gymnasium, sun deck, kitchenettes, TV, and many other modern features. It will house about one third of the resident staff. The new building replaces several old units used to house resident doctors at D. C. General.

George Washington University School of Medicine has received a grant of $30,450 to further research planning in the field of arthritis. This grant, from the Vocational Rehabilitation Administration, will enable Dr. Thomas McPherson Brown, Chairman and Professor of the Department of Medicine, and his colleagues to continue and intensify the research and studies in the treatment of arthritis which they have carried on for many years.

GW has also been awarded $250,000 to be used to augment and develop its teaching staff. The 5-year grant came from the Richard King Mellon Charitable Trusts in Pittsburgh. George Washington was one of 19 medical schools which will share in $5,750,000 in Mellon grants.

A new **Joint Commission on Medicine and Pharmacy** was announced by the American Medical Association, June 14. It will consist of 8 members, 4 representing the AMA and the other 4, leaders of the pharmaceutical profession. Dr. Milford O. Rouse, Vice Speaker of the AMA's House of Delegates, will serve as Chairman of the new Joint Commission. Other officials of the AMA to serve on the Commission will be Dr. George M. Fister, retiring President; Dr. Raymond M. McKeown, Secretary-Treasurer; and Dr. Leonard W. Larson, immediate Past President.

Representing pharmacy will be Frank W. Moudry, St. Paul, Minn.; Willard B. Simmons, Chicago; Robert Gillespie, President of the American Pharmaceutical Association; and William S. Apple, Secretary of APA.

Mr. Alvin J. Steinberg is the new **President of the Health and Welfare Council of the National Capital Area.** Mr. Steinberg, who is President of the Capital Credit Corporation of Washington, succeeds Mr. Hans A. Klagsbrunn, who retired after 2 years as President.

Dr. W. Proctor Harvey was elected **President of the Washington Heart Association** at a meeting of the Board of Directors, June 24. He has been active with the Association for 9 years, serving as Chairman of the Scientific Council of 300 physicians since 1961.

A graduate of Duke University School of Medicine, Dr. Harvey joined the faculty of Georgetown University School of Medicine in 1950. He is presently Professor of Medicine at the School and Chief of the Cardiology Division. He serves as consultant in cardiology to many institutions in the area. A co-author for "Yearbook" on cardiovascular and renal diseases, Dr. Harvey is also co-author of a textbook, "Clinical Auscultation of the Heart," and has written many articles on heart sounds and other aspects of cardiovascular diseases.

W. PROCTOR HARVEY, M.D., newly elected President of the Washington Heart Association.

Officers reëlected to serve the Association for another year are: Dr. Edward D. Freis, Vice President; Mr. Robert Ramspeck, Secretary; and Mr. Kenneth Birgfeld, Treasurer.

Dr. Modestino G. Criscitiello is a new member of the Board of Directors. Reëlected to the Board for 3-year terms were Drs. John W. DuChez, John M. Evans, John F. Finnegan, William L. Howell, John W. Latimer, Benjamin Manchester, and Bernard J. Walsh.

At the annual business meeting of the **Rheumatism Society of the District of Columbia,** May 16, the following officers were elected:

Dr. William R. Felts, *President*; Dr. Alfred Baer, *Vice President*; and Dr. William E. Reefe, *Secretary-Treasurer*.

The D. C. Dental Society installed new officers, June 11, at a meeting in the Statler-Hilton Hotel. They are:

Dr. Sidney Greenspan, *President*; Dr. James P. Kerrigan, *Vice President*; and Dr. Ashur G. Chavoor, *Treasurer*.

Dr. Wilfred Dudley is this year's President-elect.

Dr. William J. Peeples resigned as **Health Officer of Montgomery County,** June 30. His new assignment will be Chief of the Bureau of Chronic Diseases of the California State Health Department. His offices will be in Berkeley, California, next to the campus of the University of California. He also plans to teach at the University's School of Public Health. Dr. Peeples has served Montgomery County as Health Officer since February 1, 1955.

Personals

Dr. Frederic G. Burke, Professor of Pediatrics at Georgetown University School of Medicine, was appointed to the National Advisory Child Health and Human Development Council, June 7, by Dr. Luther L. Terry, Surgeon General of the Public Health Service. The Council will review and make recommendations to the Surgeon General on research and training projects and programs to be supported by NIH.

Dr. Elizabeth Parker, a pioneer in the field of female endocrinology, was one of 5 alumni of George Washington University to receive Alumni Achievement Awards at commencement, June 5. Dr. Parker was cited as an eminent physician and author. Her book, "Seven Ages of Woman," published in 1960, has been widely acclaimed by both physicians and laymen.

At the 29th Annual Meeting of the American College of Chest Physicians in Atlantic City in June, **Major General Oliver K. Niess,** Surgeon General of the Air Force, took office as First Vice President. General Niess is an Honorary member of the D. C. Medical Society.

Dr. Charles K. Petter, Medical Director of Lake County Tuberculosis Sanatorium, Waukegan, Illinois, was elected to the office of President.

Dr. Preston A. McLendon has been reappointed to the School Board of the District of Columbia for a 3-year term.

Colonel William H. Beard received the Meritorious Service Medal of the District National Guard, June 22, at a retirement ceremony at Andrews Air Force Base. Colonel Beard, who has commanded the District Air Guard's 113th Tactical Fighter Wing Hospital, retired, July 8, after 30 years of active and reserve duty. He has been a member of the District unit since 1941.

Dr. Bernard H. Zeavin, of Falls Church, Va., an Associate member of the District Medical Society, joined 5 other physicians, June 27, in New York en route to Algeria under a MEDICO program. He and his colleagues will spend a month at the Beni Messous Hospital, a 1,400-bed facility, training Algerian doctors and nurses and treating patients.

Dr. Dexter M. Bullard, Medical Director of Chestnut Lodge, Rockville, Md., has been elected a Director of the First National Bank of Maryland. He is an Associate member of the D. C. Medical Society.

On July 1 **Dr. Walter R. Stokes** retired from active practice. His new address is R.R. 1, Box 26, North River Shores, Stuart, Florida. He will devote his time to writing on marriage and family problems. During July and August he will teach a postgraduate course at Columbia University in New York on "Problems in Emotional and Sexual Behaviour of Students."

The following members of the Medical Society of D. C. were certified by the American Board of Obstetrics and Gynecology on May 3: **Drs. Leo D. Amorosi, Frank J. Bepko, Jr., Elizabeth A. Crisp, Thomas A. Gilday, and James P. Hartley.**

Books Received

Acknowledgment is made of the following books which have recently been received.

Medical Department, United States Army: Internal Medicine in World War II. Infectious Diseases, Volume II. Colonel John Boyd Coates, Jr., M.C., Editor-in-Chief; W. Paul Havens, Jr., M.D., Editor for Internal Medicine. Prepared and published under the direction of Lieutenant General Leonard D. Heaton, The Surgeon General, United States Army. Price, $6.75. Pp. 649, illustrated. Washington 25, D. C.: Superintendent of Documents, U. S. Government Printing Office, 1963.

Handbook of Pediatric Medical Emergencies, 3rd ed. Adolph G. DeSanctis, M.D., Charles Varga, M.D., and Contributors. Price, $12.75. Pp. 457, with 85 illustrations. St. Louis: Mosby, 1963.

Handbook of Ocular Therapeutics and Pharmacology. Philip P. Ellis, M.D., and Donn L. Smith, Ph.D., M.D. Price, $8.50. Pp. 193. St. Louis: Mosby, 1963.

The Care of Minor Hand Injuries, 2nd ed. Adrian E. Flatt, M.A., M.D., F.R.C.S., F.A.C.S. Price, $10.50. Pp. 274, with 120 figures. St. Louis: Mosby, 1963.

Atlas of Vascular Surgery. Falls B. Hershey, M.D., F.A.C.S., and Carl H. Calman, M.D., F.A.C.S. Illustrated by Kathryn Murphy and William R. Schwartz. Price, $18.00. Pp. 307, with 77 illustrations. St. Louis: Mosby, 1963.

An Atlas of Hemodynamics of the Cardiovascular System. Howard L. Moscovitz, M.D., Ephraim Donoso, M.D., Ira J. Gelb, M.D., and Robert J. Wilder, M.D. Price, $11.75. Pp. 277. New York: Grune & Stratton, 1963.

New and Nonofficial Drugs. An Annual Compilation of Available Information on Drugs, Including Their Therapeutic, Prophylactic and Diagnostic Status, as Evaluated by the Council on Drugs of The American Medical Association. Pp. 902. Philadelphia: Lippincott, 1963.

Clinical Gastroenterology, 2nd ed. Eddy D. Palmer, M.S., M.D., F.A.C.P. Price, $22.50. Pp. 706, with 255 illustrations. New York: Hoeber (Harper & Row), 1963.

Cancer of the Female Reproductive Organs. Alfred I. Sherman, M.D. Illustrated by Elisabeth North. Price, $13.75. Pp. 338, with 70 illustrations. St. Louis: Mosby, 1963.

Handbook of Pediatrics, 5th ed. Henry K. Silver, M.D., C. Henry Kempe, M.D., and Henry B. Bruyn, M.D. Price (paper), $4.00. Pp. 602. Los Altos, Calif.: Lange, 1963.

Obstetrics and Gynecology, 2nd ed. J. Robert Willson, M.D., Clayton T. Beecham, M.D., and Elsie Reid Carrington, M.D. Price, $13.75. Pp. 738, with 333 illustrations. St. Louis: Mosby, 1963.

Ciba Foundation Symposium: Bilharziasis, held in commemoration of Theodor Maximilian Bilharz. Edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Maeve O'Connor, B.A. Price, $11.50. Pp. 433, with 46 illustrations. Boston: Little, 1962.

Obituaries

Luther Sheldon, Jr., A.B., M.D., F.A.C.S.

(1883–1963)

Rear Admiral Luther Sheldon, MC, USN (Ret.), formerly Assistant Chief of the Navy's Bureau of Medicine and Surgery, died, June 22, 1963, at the U. S. Naval Hospital in Bethesda after a long illness. He retired from active duty on August 1, 1946 with the rank of Rear Admiral.

Dr. Sheldon was born, February 17, 1883, in Norfolk, Va. to Luther and Jane Baldwin Sheldon. He attended Norfolk Academy and Randolph-Macon Academy. He received his Bachelor of Arts degree from Hampden-Sydney College in 1903 and his medical degree from the University of Michigan in 1909. After interning at the City Hospital of New York he was commissioned in the Navy in 1911.

During his long Naval career, he served on the hospital ship *U.S.S. Solace*, 1912–14, and on many warships. He had also been stationed at the Naval Academy and at Pearl Harbor, Philadelphia and Norfolk. He taught for 5 years at the Naval Medical School in Washington, 1910–12 and 1914–17.

He returned to Washington in 1939 for duty in the Bureau of Medicine and Surgery, serving as Assistant Chief of the Bureau from 1940 to 1944. His last tour of duty was Medical Officer for the Fifth Naval District.

After 36 years' active duty, before his retirement in 1946, he served 7 years as Associate University Physician at George Washington University.

Admiral Sheldon had been an Active member of the Medical Society of the District of Columbia since 1948. He was a Fellow of the American College of Surgeons and a member of the American Medical Association, the Southern Medical Association, and Military Surgeons of the United States. A Mason, he also belonged to the Army-Navy Club, the Chevy Chase Club, and several fraternal organizations.

He held the Mexican Service Medal, the Victory Medal, Escort Clasp, and the Legion of Merit. In

1943 he received an honorary Doctor of Laws degree from his alma mater, Hampden-Sydney College.

Surviving him are his wife, Mrs. Ruth Noyes Sheldon, of the home address, 3203 Cleveland Avenue, N.W., and a daughter, Mrs. John F. Taggart, of Garden City, N. Y.

Max William Bloomberg, B.A., M.D.

(1895–1962)

Dr. Max W. Bloomberg, an Associate member of the D. C. Medical Society, died, December 20, 1962, at Johns Hopkins Hospital in Baltimore. His death was only recently reported to the Executive Offices of the Medical Society.

Dr. Bloomberg, a Canadian, was born, February 22, 1895, to Hugh and Deborah Slavick Bloomberg. He received his Bachelor of Arts degree from McGill University, Montreal, in 1915 and his medical degree from the same University in 1918. He interned for 2 years at Royal Victoria Hospital, Montreal, and was a resident physician in pediatrics at the New York Home for Hebrew Infants from 1923 to 1925. He was Assistant Physician at Children's Memorial Hospital, Montreal, from 1925 to 1947, and Associate Pediatrician at the Jewish General Hospital in the same city from 1930 to 1947.

During World War II he served in the Medical Corps of the Royal Canadian Army for 5 years, 1942 to 1947.

After the War Dr. Bloomberg came to the Washington area and served as Director of Public Health for the City of Greenbelt, Md. from May 1950 to December 1953. He continued in private practice in Greenbelt until 1961, when he moved to Silver Spring, Md. His last address was 239 Cooper Street, Springfield 8, Mass.

Dr. Bloomberg was elected to Associate membership in the D. C. Medical Society in 1951.

He is survived by his wife, Mrs. Phyllis Kirsch Bloomberg, and a son.

Training Program in Psychiatry—Waldrop

(*Continued from page 308*)

preparation of the material. The objective of this requirement is to provide an opportunity for each resident to have at least 1 experience during his formal training in preparing a scientific communication.

Although the foregoing description of the Psychiatric Residency Training Program at Saint Elizabeths Hospital has necessarily stressed the academic and didactic aspects, it should again be noted that the critical emphasis lies in the clinical experience, since it is only through this that the resident engages the raw material out of which clinical skill and knowledge can be fashioned. In psychiatry, too, the patient remains the soundest teacher.

Phenothiazine in Schizophrenic Males—Robinson et al

(*Continued from page 313*)

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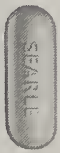

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[1] Asher, L. M.: The Choice of Anticholinergic Drugs in the Treatment of Functional Digestive Diseases, Amer. J. Dig. Dis. 4:260-275 (April) 1959.

BOOK REVIEWS

Gastroenterology. Volume I, 2nd ed. Henry L. Bockus, M.D., and Present and Former Colleagues at the University of Pennsylvania Graduate School of Medicine and School of Medicine. Price, $25.00. Pp. 958, illustrated. Philadelphia: Saunders, 1963.

The first edition of this book appeared some 20 years ago and remained a classic until recently. With the advent of newer techniques and methods of diagnosis, as well as newer concepts of pathophysiology of the alimentary tract, this volume is a timely addition. It consists of 958 pages with 298 illustrations.

The staff of authors has been enlarged and includes contributions from present faculty, former faculty members, and graduate students of the Graduate School of Medicine and the School of Medicine of the University of Pennsylvania.

The book discusses all known primary and secondary disorders of the digestive tract and its closely related organs. Each chapter is headed by an outline and is followed by orderly discussion of each disorder as to causative factors, clinical features, diagnostic aids, differential diagnosis, and therapy. The introductory section deals with the Examination of the Patient. It also includes a completely new discussion on the oral manifestations of internal diseases.

Section II is on the Esophagus and Diaphragm. Section III deals with Affections of the Stomach, with 150 pages devoted to modern methods of diagnosis and management of peptic ulcer.

Controversial theories and explanations are brought up but not stressed in order to avoid confusion. References at the end of each chapter are adequate. This book is highly recommended for those who practice gastroenterology and/or medicine in general. As a reference book, it is invaluable.

Azad J. Vosger, M.D.

Medical Department, United States Army: Wound Ballistics. Colonel John Boyd Coates, Jr., M.C., Editor-in-Chief; Major James C. Beyer, M.C., Editor for Wound Ballistics. Prepared and published under the direction of Lieutenant General Leonard D. Heaton, The Surgeon General, United States Army. Price, $7.50. Pp. 883, illustrated. Washington 25, D. C.: Superintendent of Documents, U. S. Government Printing Office, 1962.

This is one of the volumes comprising the official history of the Medical Department of the U. S. Army in World War II, prepared by the Historical Unit, U. S. Army Medical Service, and published under the direction of the Surgeon General, U. S. Army.

The individual chapters are written by experts who did the research or conducted the casualty surveys. There are chapters dealing with enemy ordnance materiel of World War II and Korea; the correlation between a missile, its mass and velocity and its resulting wound; and the mechanism of wounding as studied in the laboratory. There are several chapters on casualty surveys of several of the battles, both in the Pacific and European theatres. There are 2 chapters dealing with the development of personnel armor; body armor was effective in significantly decreasing the mortality rate in the Korean War.

This interesting, comprehensive and informative volume will certainly become the basic reference on this subject for many years, and as such will be extremely useful to all those interested in any phase of this subject.

Hugo V. Rizzoli, M.D.

Bedside Diagnosis, 6th ed. Charles Seward, M.D., F.R.C.P. (Edin.). Price, $7.00. Pp. 499, illustrated. Baltimore: Williams & Wilkins, 1962.

This book is a British text presenting an outline type of presentation on the subject of physical diagnosis. It should be of interest to medical students and to those preparing for State Board examinations as a refresher or general outline for study. However, one must rely on standard textbooks of medicine for more complete details of the various topics discussed.

The chapters are arranged to present discussions of various presenting symptoms or signs of disease. Each chapter is headed by a "Synopsis of Causes"; for example, Chapter III, entitled "Head Pain," presents (1) Local Causes (extracranial, cranial and intracranial), (2) General Causes, and (3) Psychogenic Causes. Each chapter then follows with "Physiology" and proceeds through "Diagnostic Approach," discussing each of the various causes listed under "Synopsis of Causes." The description of treatment is brief and in outline form.

This book does not include any discussion of therapy.

Some of the general topics are incompletely dealt with and lacking in up-to-date detail; for example, the chapter on jaundice does not include any reference to bilirubin conjugation.

The chapter on "Drugs as Causes of Disease" is useful although one disadvantage is that the trade names for the drugs listed are those of Great Britain, which are different from the U.S.A. trade names. This difficulty is in part overcome by the generic names that are also listed.

There is a table of normal laboratory values at the end of the text which is fairly complete.

John W. Winkler, Jr., M.D.

Physiology of the Circulation in Human Limbs in Health and Disease. John T. Shepherd, M.D., M.Ch., D.Sc. Price, $12.00. Pp. 416, with 179 illustrations. Philadelphia: Saunders, 1963.

This book has compiled into one source much of the experimental work on extremity vascular reactions in health and disease. It cites the work, provides copious

(Continued on page 28)

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Book Reviews

(Continued from page 26)

graphic illustrations, and documents the experiments of many observers on the neurogenic, humoral, thermal and physical stimuli on blood vessels, and summarizes the findings at the end of each chapter.

The chapters on the humoral responses are particularly useful. Included are discussions on epinephrine, norepinephrine, isopropylnorepinephrine, pheochromocytoma, 5-hydroxytryptamine, adenosine triphosphate, acetylcholine, histamine, vasopressin, oxytocin and bradykinin.

The last third of this 416-page volume is devoted to the deviations of vascular responses in disease states. In addition to the usual vascular diseases, discussions on disorders not given prominence in other vascular disease books are presented. These include: vascular effects of arterial gas embolism, limb blood vessels in essential hypertension, idiopathic orthostatic hypotension, limb circulation in diseases and injuries of the nervous system, insulin and hypoglycemia, hyperthyroidism and hypothyroidism, fainting, nicotine and smoking, beriberi, Wernicke's encephalopathy, myopathy and muscle blood flow, finger clubbing and hypertrophic osteoarthropathy and osteitis deformans.

It is a good reference for the clinician interested in vascular phenomena and it complements the usual books on vascular disorders which tend to be clinically oriented

JOHN N. SHADID, M.D.

Ciba Foundation Symposium on Pulmonary Structure and Function. A. V. S. DE REUCK, M.Sc., D.I.C., A.R.C.S., AND MAEVE O'CONNOR, B.A., Editors for the Ciba Foundation. Price, $11.50. Pp. 403, with 103 illustrations. Boston: Little, 1962.

This book is an edited résumé of 18 papers presented on July 18 and July 20, 1961, at the only Ciba Symposium on pulmonary problems. There were 29 invited guests at this symposium and the list of these participants is almost a "Who's Who in Pulmonary Physiology." The meeting was limited to the invited guests and, as one might expect, with almost no exceptions the papers are representative of the current research interests of the authors. The subjects are entirely basic research in character with little or no attempt made to relate the information to clinical medicine. Each paper is followed by a discussion and question-and-answer section which often is more informative and interesting than the original paper.

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This book would be a valuable and fascinating addition to the physiologist's library, for it points out several ingenious laboratory approaches to difficult problems, such as regional pulmonary gas exchange measurements using inhaled radioactive gases. Another chapter describes a technique for the direct measurement of gas flow in lobar and segmental bronchi, using a novel type of small flowmeter inserted into a given lobe or segment under direct vision through the bronchoscope.

For the pathologist there is a brief summary of recent advances of knowledge in the area of pulmonary anatomy by Dr. Averill Liebow of Yale, and a chapter on the location and histology of the glomus pulmonale by Dr. Vernon Krahl of the University of Maryland. There are some fascinating electron-microscopic studies of the "submicroscopic anatomy and pathology of the blood-air pathway in the lung."

For the clinician Dr. Julius Comroe's paper on the physiologic and biochemical effects of pulmonary artery occlusion sheds new light on the radiologic and clinical characteristics of pulmonary embolization. There also is important information for the practicing physician in Dr. Cournand's paper on variations in ventilation and perfusion within emphysematous lungs.

This entire volume has no discernible organization because of the purposely informal nature of the Ciba Symposium, so one can read it through from beginning to end or select chapters of special interest for piecemeal reading. Unfortunately for all but the physiologist or the physician with some background in pulmonary physiology, the content of this volume presupposes that the reader has a more than superficial knowledge of the most difficult concepts of modern pulmonary physiology.

JAMES P. MANN, M.D.

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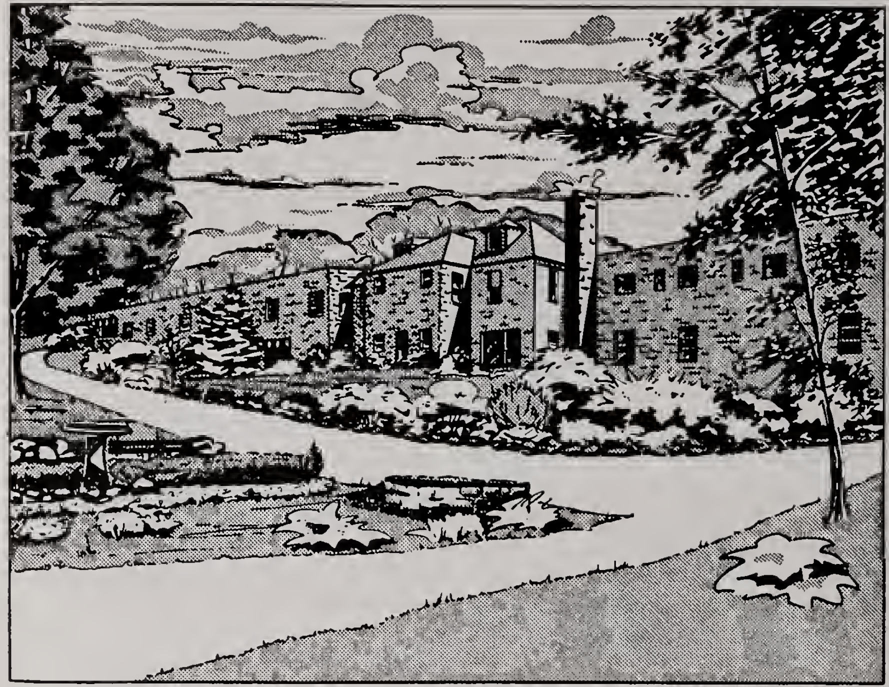

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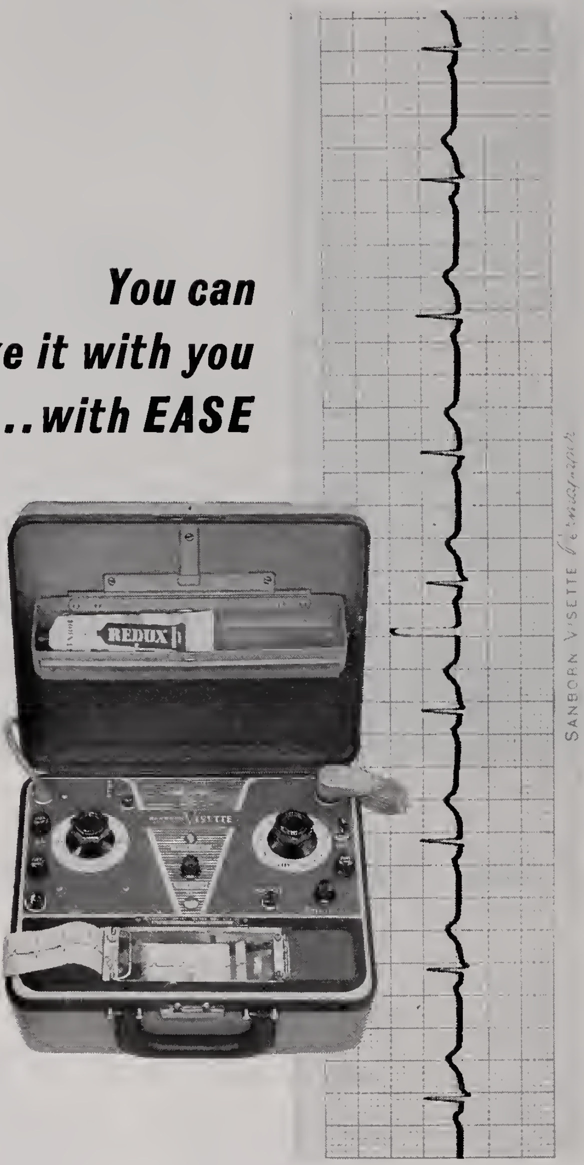

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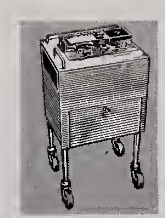

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*AMA Council on Foods and Nutrition: The Regulation of Dietary Fat, *JAMA* 181:411-423 (August 4, 1962).

**AMA Council on Foods and Nutrition: Composition of Certain Margarines, *JAMA* 179:719 (March 3, 1962).

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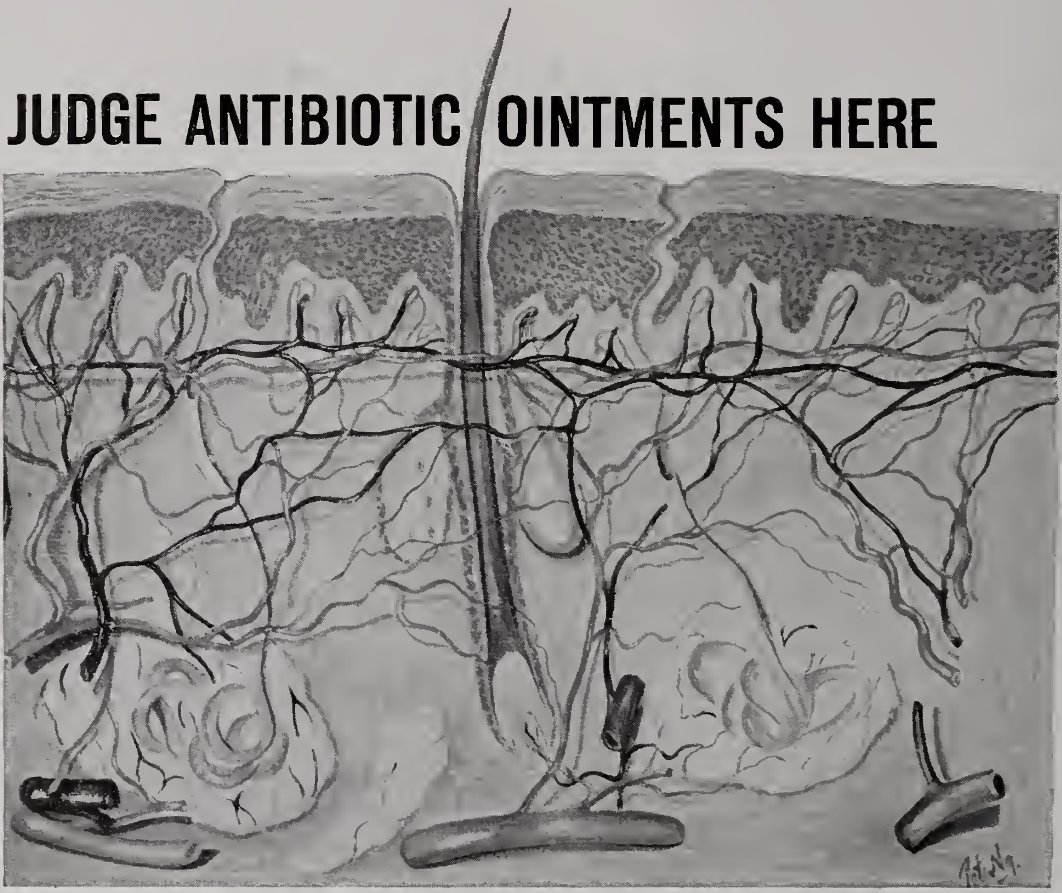

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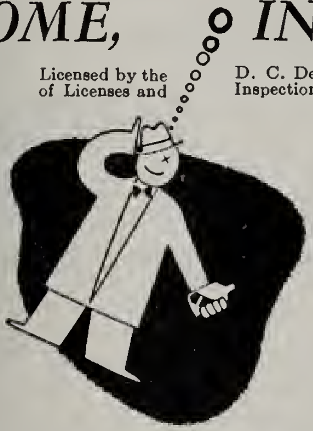

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September 13: Medical and Chirurgical Faculty of the State of Maryland. Commander Hotel, Ocean City, Md. Address: Mr. John Sargeant, *Executive Secretary*, 1211 Cathedral St., Baltimore 1, Md.

October 7–10: 13th Annual Instrument Symposium and Research Equipment Exhibit. National Institutes of Health, Bethesda, Md. Address: Mr. James B. Davis, Executive Secretary, National Institutes of Health, Bethesda 14, Md.

October 13–18: Third International Congress of Plastic Surgery. Sheraton-Park Hotel, Washington. Address: Dr. Leslie H. Backus, Secretary-General, 217 Linwood Avenue, Buffalo 9, N. Y.

October 13–19: XVIIth World Medical Assembly. Commodore Hotel, New York. Address: Dr. Harry S. Gear, *Secretary-General*, World Medical Association, 10 Columbus Circle, New York 19, N. Y.

October 20–23: American College of Gastroenterology. Shoreham Hotel, Washington. Address: Mr. Daniel Weiss, Executive Director, 33 West 60th Street, New York 23, N. Y.

October 21–22: 1963 Scientific Session: Conference on Unusual Forms and Aspects of Cancer in Man. Biltmore Hotel, New York. Address: Dr. Roald N. Grant, Director, Professional Education, American Cancer Society, Inc., 521 West 57th Street, New York 19, N. Y.

October 25–26: Second National Congress on Medical Quackery. Sheraton-Park Hotel, Washington. Address: Dr. F. J. L. Blasingame, Executive Vice President, American Medical Association, 535 North Dearborn Street, Chicago 10, Ill.

November 4–6: Association of Military Surgeons of the United States. Statler-Hilton Hotel, Washington. Address: Brig. Gen. Frank E. Wilson, Executive Director, 1500 Massachusetts Ave., N.W., Washington 5, D.C.

November 18–20: Annual Scientific Assembly, The Medical Society of the District of Columbia. Statler-Hilton Hotel, Washington. Mr. George W. Cooley, Executive Director, 1718 M Street, N.W., Washington 36, D. C.

November 18–21: 57th Annual Meeting of Southern Medical Association. New Orleans, La. Address: Mr. Robert F. Butts, *Executive Director*, 2601 Highland Avenue, Birmingham 5, Ala.

November 18–23: National Association for Mental Health. Sheraton-Park Hotel, Washington. Address: Mr. Philip E. Ryan, Executive Director, 10 Columbus Circle, New York 19, N.Y.

December 8–11: American Society of Hematology. Statler-Hilton Hotel, Washington. Address: Dr. Charles Rath, Treasurer, Georgetown University Hospital, Washington 7, D.C.

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References: 1. A.M.A. Council on Dru
J.A.M.A. 183:469 (Feb. 9) 1963. 2. Gruenbe
F.: Curr. Ther. Res. 2:1 (Jan.) 1960.

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September, 1963 VOLUME XXXII . NUMBER 9

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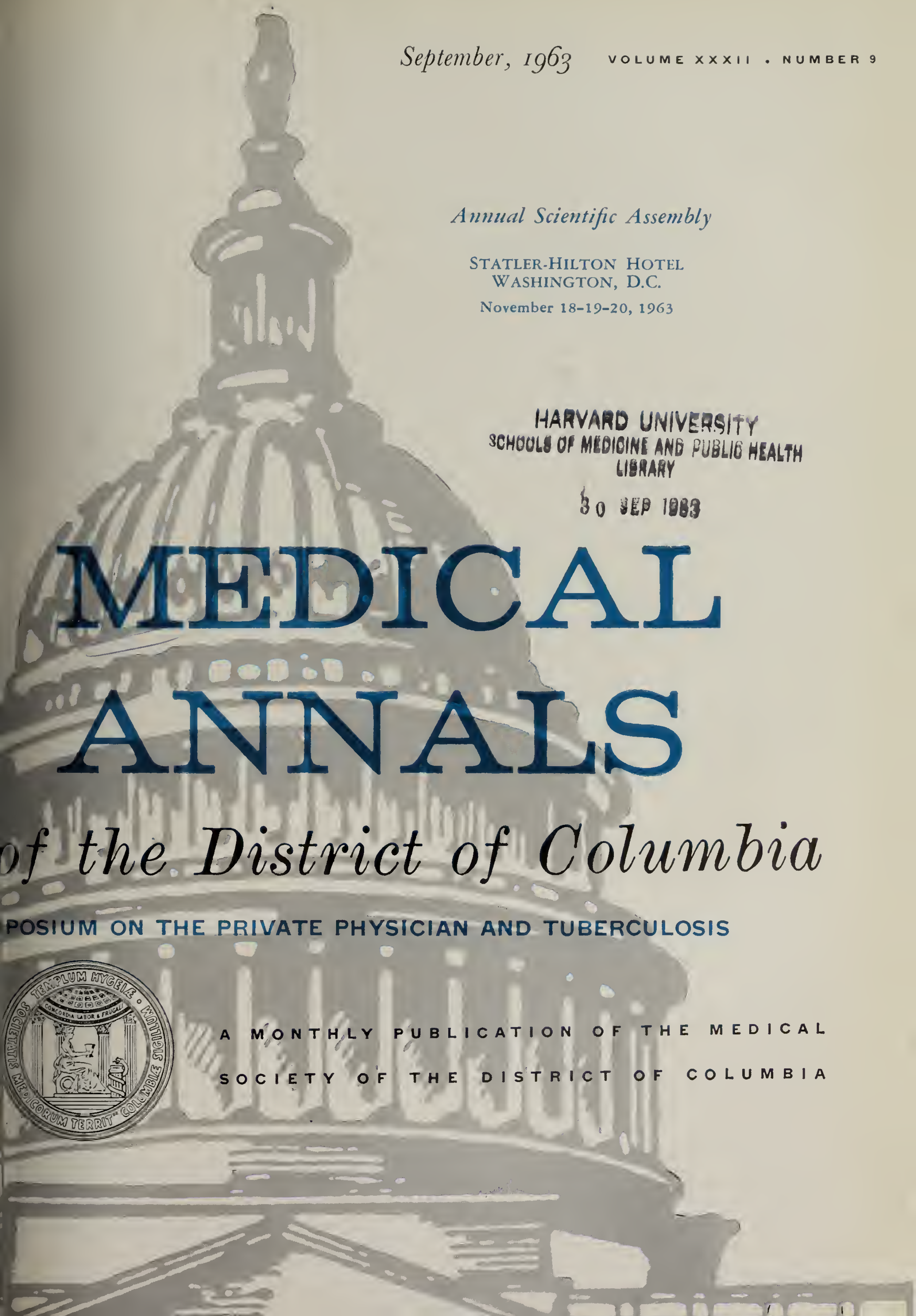

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te inal allergy, vasomotor rhinitis, pruritus, physical aller-
es reactions to injection of contrast media, reactions to
e peutic preparations, and allergic transfusion reactions;
sc postoperative nausea and vomiting, nausea of preg-
an , motion sickness, parkinsonism and drug-induced
tr pyramidal reactions, and quieting emotionally disturbed
il en. Parenteral administration is indicated where, in the
d ent of the physician, prompt action is necessary and
al herapy would be inadequate. ***Precautions:*** Avoid
oc taneous or perivascular injection. Single parenteral dos-
ge reater than 100 mg. should be avoided, particularly in hypertension and cardiac disease. Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers, if used with this product, should be prescribed with caution because of possible additive effect. Diphenhydramine hydrochloride has an atropine-like action which should be considered when prescribing it. Cream (Ointment) should not be applied to extensively denuded or weeping skin areas. ***Supplied:*** Kapseals® of 50 mg.; Capsules of 25 mg.; Emplets® (enteric-coated tablets) of 50 mg.; in aqueous solutions: 1-cc. Ampoules, 50 mg. per cc.; 10- and 30-cc. Steri-Vials,® 10 mg. per cc. with 1:10,000 benzethonium chloride as a germicidal agent; Elixir, 10 mg. per 4 cc. with 14 per cent alcohol; 2 per cent Ointment (water-miscible base).

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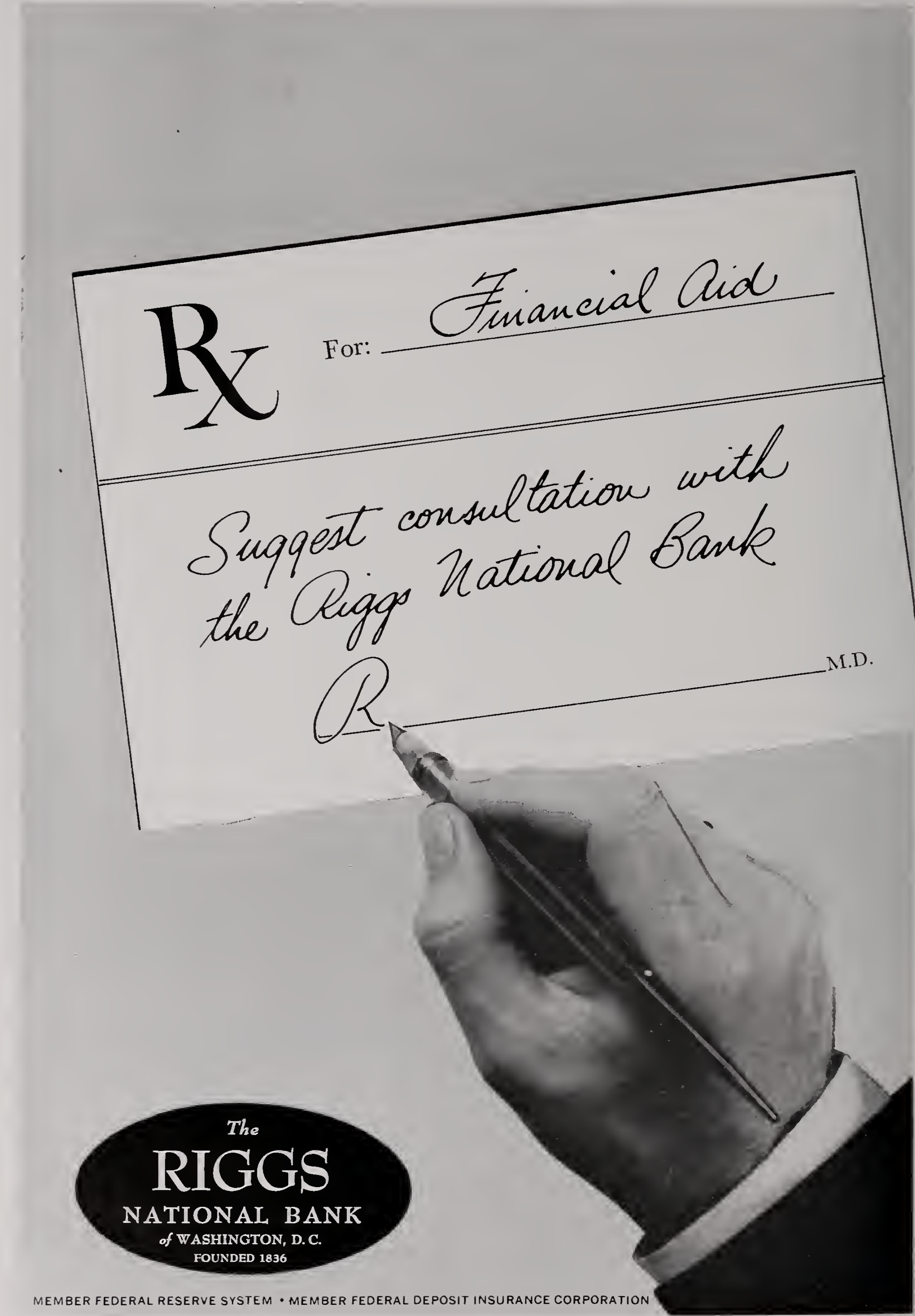
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*AMA Council on Foods and Nutrition: The Regulation of Dietary Fat, *JAMA* 181:411-423 (August 4, 1962).

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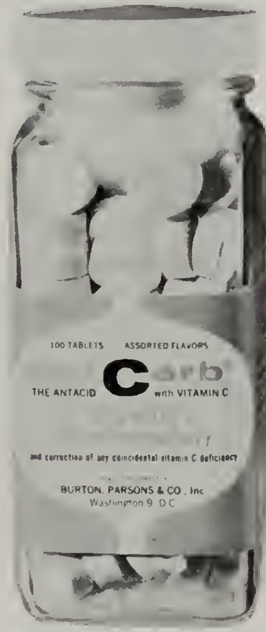
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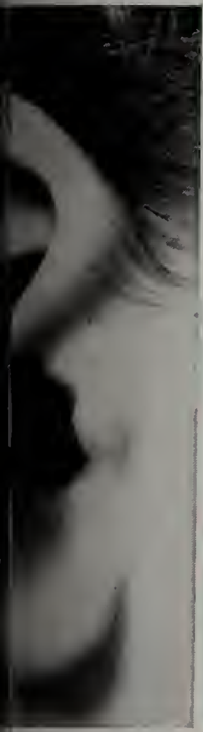

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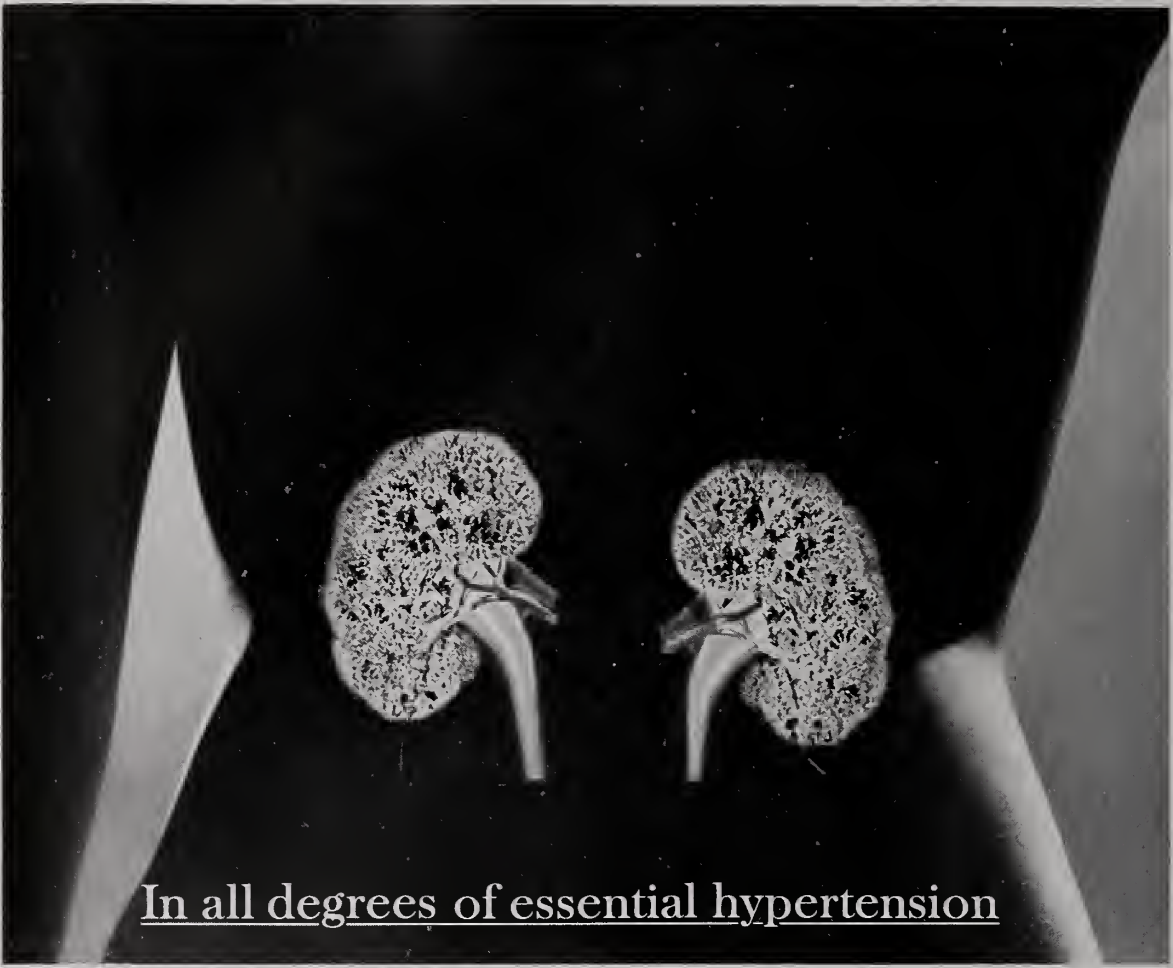
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References: (1) Moyer, J. H., and Heider, C.: Am. J. Cardiol. *9*:920 (June) 1962. (2) Brest, A. N., and Moyer, J. H.: Pennsylvania M. J. *63*:545 (Apr.) 1960. (3) Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. *10*:516 (June) 1962. (4) Hutchison, J. C.: Current Therap. Res. *4*:610 (Dec.) 1962. (5) Feldman, L. H.: North Carolina M. J.: *23*:248 (June) 1962.

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BOOK REVIEWS

Medical Department, United States Army: Surgery in World War II. Activities of Surgical Consultants, Volume I. Colonel John Boyd Coates, Jr., M.C., Editor-in-Chief; B. Noland Carter, M.D., Editor for Activities of Surgical Consultants, and Elizabeth M. McFetridge, M.A., Associate Editor. Prepared and published under the direction of Lieutenant General Leonard D. Heaton, The Surgeon General, United States Army. Price, $6.50. Pp. 621, with 104 illustrations. Washington 25, D. C.: Superintendent of Documents, U. S. Government Printing Office, 1962.

This is one of several volumes comprising the official history of the Medical Department of the U. S. Army in World War II, prepared by the Historical Unit, U. S. Army Medical Service.

This is the first 2 volumes documenting the Surgical Consultants system in World War II. It deals with the activities and problems of the Surgical Consultants in the Office of the Surgeon General and in the Service Commands in the Zone of Interior. The second part of the volume deals with the work of the Surgical Consultants to Field Armies in Theatres of Operation.

This interesting and readable volume records the significant role of the Surgical Consultants system in the success of the U. S. Army Medical Corps and will certainly be of great interest to all the doctors who served in the U. S. Army Medical Corps, and to all interested in the history of the U. S. Medical Department in World War II. It will prove helpful to future military surgeons.

Hugo V. Rizzoli, M.D.

Current Therapy 1963: Latest Approved Methods of Treatment for the Practicing Physician. Edited by Howard F. Conn, M.D., with 12 Consulting Editors. Price, $12.50. Pp. 775. Philadelphia: Saunders, 1963.

There are 3 main advantages of an annual audit of therapy such as Current Therapy provides: 1. An annual review brings the doctor up to date more promptly than textbooks, which are revised every 3 or 4 years. 2. A volume confined to therapy makes for quick and easy reference. 3. Discussion of the therapy of diseases by men who are especially qualified in some particular disease or diseases is more apt to present the best therapy, although admittedly there may be other satisfactory ways to treat some of the diseases.

Dr. Conn with the aid of a distinguished group of consulting editors has selected many outstanding experts to write about the large number of topics considered. The book has been well organized and edited, and the format is excellent. The "Normal Laboratory Values of Clinical Importance" in the front and back of the book are very helpful for ready reference. Every clinician, and especially the general practitioner and the internist, should have a copy of this fine book at his elbow.

W. M. Y.

Politics of Age. Proceedings of the University of Michigan, 14th Annual Conference on Aging, Ann Arbor, Michigan, June 19–20, 1961. Edited by W. Donahue and C. Tibbitts. Price, $5.00. Pp. 221. Ann Arbor, Mich.: Division of Gerontology, University of Michigan, 1962.

For the past 16 years Conferences on Gerontology have been held by the Division of Gerontology of the University of Michigan. In 1961 the topic was "The Politics of Age." Although the volume of speeches is supposed to be a "comprehensive examination of the political implications of the increasing number of older people in the population of the United States," the majority of the papers leave the reader with very little solid data.

However, 3 papers were based on actual research on age and politics. One of these papers was given by Professor Angus Campbell of the University of Michigan Survey Research Center. The paper looked into older persons' political attitudes. Based on his research, he does not believe that these older people will become a self-conscious political group with a sense of common interest for the following reasons:

1. It is difficult for a segment of the population as heterogeneous as an age group to develop a sense of common identity.
2. As a dispersed minority over a country they have no choice but to go with one major party or another.
3. This is the age group most strongly committed to traditional party attachment and least susceptible to special appeals to move away from habitual patterns of thought and action.
4. The aged are evenly divided among Democrats and Republicans. They cannot attract the attention of party professionals on the basis of any type of predominant support.

This speech was like a cool wind through a heated room. It is a shame that the other papers did not match this that sultry June in 1961.

Walter Polner

A Manual of Simple Burial. Edited by Ernest Morgan. Price (paper), $1.00. Pp. 64. Burnsville, N.C.: Celo Press, 1962.

The increasing cost and ostentation of funerals have earned considerable uneasiness in many circles, although "keeping up with the Joneses" appears to be a difficult trend to overcome. Too often the death of a loved one finds the family entirely unprepared as to type of observance, location of funeral plot, and cost of casket, for example, and at the mercy of the funeral director and grieving friends. One union found that of the 14 million dollars paid from its welfare fund, 11 million went for funeral expenses.

As a countermove to replace elaborate funerals with memorial services held in the absence of the body, at least 50 funeral societies have been organized to encourage preplanning and greater dignity.

(*Continued on page 26*)

NEW AND FORTHCOMING BOOKS

THROMBOPHLEBITIS by **Roger M. Morrell, M.D.,** *Senior Resident in Medicine, University of Miami School of Medicine; Research Fellow, Florida Heart Association.*

This is a book for practicing internists, surgeons, and those concerned with the investigation of vascular disease. Its presentation as well as its useful and comprehensive bibliography will provide the means for attaining a well-rounded and up-to-date view of our most widespread and destructive disorder.

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THE MEDICAL CARE OF CHILDREN by **S. D. M. Court,** *James Spence Professor of Child Health, University of Durham.*

Written by a group of pediatricians, this volume covers selected common and important problems at each stage of child development. Illustrative case histories are included.

Published by OXFORD UNIVERSITY PRESS *342 pages* **$11.50**

SOCIALIZED MEDICINE IN ENGLAND AND WALES by **Dr. Almont Lindsey,** *Professor of History, Mary Washington College of the University of Virginia.*

The only complete, impartial, and authoritative assessment of the background, organization, and administration of the British National Health Service, this book is a prime document in the growing controversy over the method of organizing and financing medical care in the United States. It answers the varied questions concerning the workings and efficiency of government-administered medicine that are more and more in the minds of thinking Americans.

Published by UNIVERSITY OF NORTH CAROLINA PRESS **$8.50**

RECENT ADVANCES IN THE SURGERY OF TRAUMA by **David N. Matthews, M.D.**

Physicians and surgeons faced with treating victims of car collisions, fires, home and industrial accidents, etc., will find this new volume a most helpful adjunct to standard textbooks on trauma. For here, in detail, are discussions of topics not fully covered elsewhere—discussions that present the best of modern therapy and, where clinically valuable, findings in current research.

Published by LITTLE, BROWN & CO. *452 pages, 180 illustrations* **$15.00**

HUMAN SEX AND SEX EDUCATION by **Warren R. Johnson,** *Professor of Physical Education and Health, University of Maryland.*

Although designed especially for use as a text in health and physical education courses, this book will be very useful to general practitioners, psychologists, social hygiene workers and members of child study groups. The book is a frank, objective examination of modern America's sex attitudes and behaviors in light of their historical backgrounds and in the context of rapidly changing circumstances.

Published by LEA & FEBIGER *Approx. 200 pages* **$4.50**

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Book Reviews

(*Continued from page 24*)

This booklet gives much information as to the aims of these societies, the addresses of the funeral societies (there are 2 in Virginia and 1 each in Maryland and the District of Columbia), and information as to the mechanics of bequeathing one's eyes to Eye Banks or his body to a medical or dental school. It is a book which should be in the hands of every clergyman and physician.

W. O.

Counseling in Medical Genetics, 2nd ed. SHELDON C. REED, PH.D. Price, $5.50. Pp. 278. Philadelphia: Saunders, 1963.

In reviewing a book of this type one is always taken aback by the new information which it contains. This is one field in medicine which has gradually progressed to a point where many things which were previously guesswork, or poorly understood, are now coming into better focus. Diseases which were previously thought to be environmental in etiology are now clearly indicated as genetic or mixed genetic-environmental.

This book is almost a complete review of the newest advances in this field over the past 5 years, and I think it would be of great value to any practitioner. Many of the questions that a specialist is asked are answered in this book. One of its greatest values is its extensive bibliography.

The only fault which I can find, and it is a minor one, is that the cases dealt with in the book, which add to its interest, are primarily from a selected group and do not include the large, low-income clinic group. I point this out because many more hereditary diseases are found in the low-income group where intermarriage is more frequent. However, I can recommend this book to anyone; whatever his field of medicine, he will gain some new knowledge within his own field and certainly a better comprehension of the problems of physicians in other fields of medicine.

FRANCIS C. MAYLE, JR., M.D.

Handbook of Pediatrics, 5th ed. HENRY K. SILVER, M.D., C. HENRY KEMPE, M.D., AND HENRY B. BRUYN, M.D. Price (paper), $4.00. Pp. 602. Los Altos, Calif.: Lange, 1963.

This is a very good book if used within the limitations set by its authors: "—a concise and ready available digest of the material necessary for the diagnosis and management of pediatric disorders; —this handbook is not intended to be used as a substitute for the more complete pediatric texts and reference works but as a supplement to them."

It measures 7 by 4 inches, but its 600 pages contain a surprising wealth of material, up-to-date, accurate, and in an easily read format—much more so than any similar type of pediatric compendium. It fits readily into a dashboard compartment or coat pocket and I

(*Continued on page 27*)

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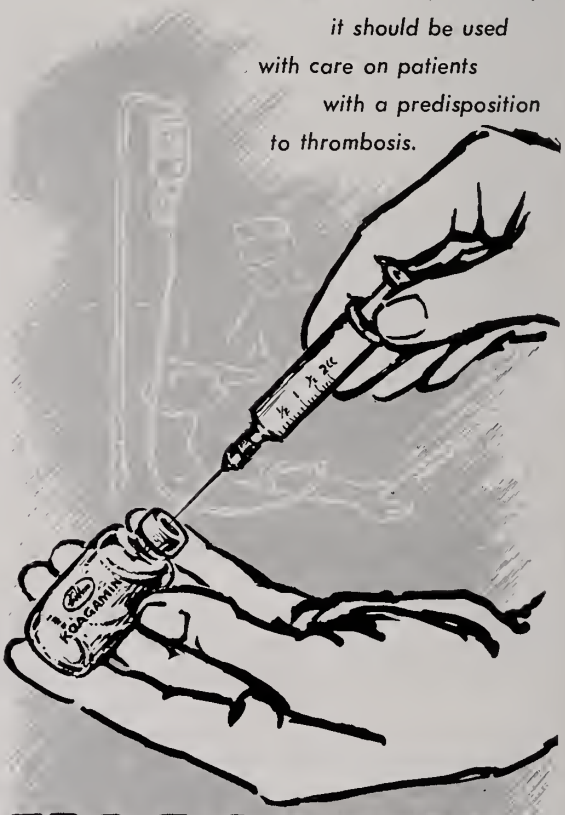

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Book Reviews

(*Continued from page 26*)

predict it will be well thumbed by the harassed pediatrician or house doctor, pressed for time, until more elaborate references are available.

Emphatically, there is no loss of clarity for the sake of brevity—too often the case in this type of book. Disconcerting omissions of a subject are rare, and infrequently there seems to be insufficient cross reference by subject in the index. These do not appreciably diminish the book's value and this reviewer recommends it wholeheartedly.

A. M. Cohen, M.D.

Ciba Foundation Study Group No. 14. Intestinal Biopsy. Edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Margaret P. Cameron, M. A. In honour of Professor C. Jiménez Diaz. Price, $2.95. Pp. 120, with 53 illustrations. Boston: Little, 1963.

This is a remarkable collection of monographs and discussions concerning a relatively new avenue of investigation, namely, "Intestinal Biopsy." It is published by the Ciba Foundation Study Group. There are 6 formal papers which pursue the topics of the microscopic appearance of intestinal mucosa in normal and abnormal states. Chiefly studied by means of the flexible small diameter tube have been patterns of ileum and jejuneum in ideopathic steatorrhea, tropical and nontropical sprue and coeliac disease.

The role of a gluten-free diet is discussed thoroughly in coeliac disease, and mucosal evidence of changes are presented when its use is restricted. Electron microscopic studies suggest the reason for limited ability of the mucosa to handle fat, carbohydrate and certain proteins in malabsorptive states. The pathogenesis of coeliac disease in children and nontropical sprue in adults is elucidated. These diseases show characteristic jujuneal mucosal and villous patterns that can be returned to normal by the use of a gluten-free régime.

The A. C. Fraser monograph "on the significance of mucosal changes" is both stimulating and provocative. It implies genetic and barrier mucosal faults, and enzymatic faults are in dramatic interplay in malabsorptive states.

The study from South India on tropical sprue will give all interested medical personnel a thorough insight into this seldom here seen entity. It is stated that endemic sprue and epidemic sprue may be the same disease and there may be a number of etiologic agents such as infections, toxemias, deficiency states, etc. that can cause damage to the small bowel wall and give rise to the syndrome of clinical sprue. The high incidence of abnormal patterns in control subjects and the nonconclusive patterns in tropical sprue patients suggest that intestinal biopsy is of small diagnostic significance here.

James T. Burns, M.D.

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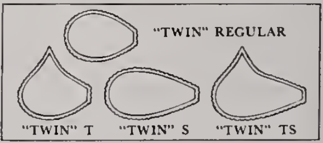

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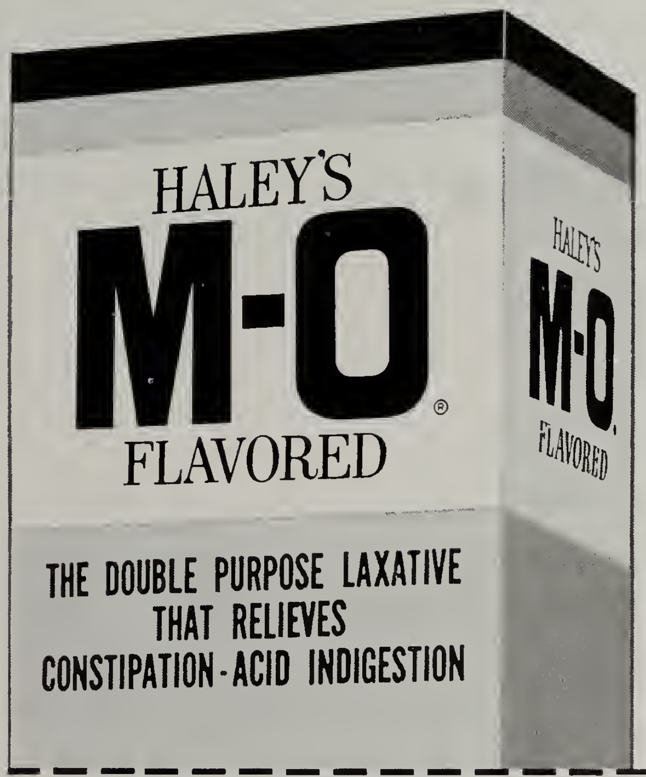
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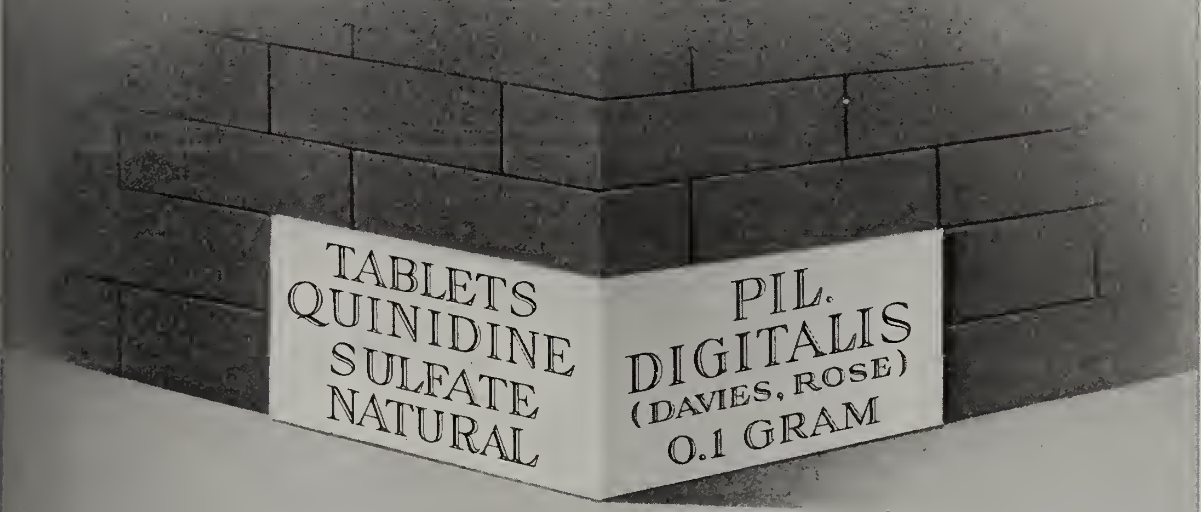
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MEDICAL ANNALS

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A Note about the Symposium on the Private Physician and Tuberculosis

This Symposium was held, June 6, 1963, at the Hotel Statler-Hilton, Washington, D. C., under the sponsorship of the District of Columbia Academy of General Practice, the American College of Chest Physicians, the Medical Society of the District of Columbia, the District of Columbia Thoracic Society, the American Thoracic Society, and the District of Columbia Tuberculosis Association.

The Planning Committee consisted of Dr. James E. Fitzgerald, Chairman; Drs. J. Winthrop Peabody, Sr., Samuel Diener, Moe Weiss, and Roy G. Klepser.

The purpose of the Symposium was to present new developments in tuberculosis treatment which are increasingly making it possible to return the management of the tuberculous patient to the private physician. Washington was selected as the meeting-site because this area represents a major spawning ground for tuberculosis in this country.

The Planning Committee extends its grateful appreciation to the distinguished speakers and to each physician who attended and contributed to the success of the Symposium.

It is the belief of the Planning Committee that the papers which follow represent an unusually comprehensive collection of authoritative information concerning the diagnosis, therapeutic management, and control of tuberculosis. They pose a challenge to all private physicians to involve themselves vigorously in the accelerating offensive against tuberculosis.

The Private Physician's Role in Tuberculosis Control*

J. ARTHUR MYERS, M.D., M.C.C.P., F.A.C.P.

Professor Emeritus of Public Health and Internal Medicine, University of Minnesota

In the vast literature pertaining to the phenomenal accomplishments in tuberculosis control in the United States, relatively rarely is mention made of the role played by physicians in private practice. Yet when one investigates, it is found that in practically every project reported, private physicians did a large share of the work. Nearly all of the pioneers, including Baldwin, Biggs, Bowditch, Brown, Flick, Osler, Taylor and Trudeau, were in private practice. In fact, when the first meeting of the National Association for the Study and Prevention of Tuberculosis (later known as the National Tuberculosis Association) was held in Washington, D. C. in May 1905, Drs. Herman Biggs and William Osler were seated on the platform when Dr. Edward Trudeau[1] delivered his memorable first President's Address on the evening of May 18. For many years after this Association was organized the Board of Directors was composed largely of physicians in private practice. This was also true of a high percentage of presidents and other officers of the National Association as well as its component state and county societies.

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* Presented as part of the Symposium on the Private Physician and Tuberculosis, sponsored by the District of Columbia Academy of General Practice, the American College of Chest Physicians, the Medical Society of the District of Columbia, the District of Columbia Thoracic Society, the American Thoracic Society, and the District of Columbia Tuberculosis Association, in Washington, D. C., June 6, 1963.

Many of our State Boards of Health were created through bills drawn by physicians in private practice which legislators enacted into law. Since the first State Board of Health was established in Massachusetts in 1869 large numbers of physicians in private practice have held offices and memberships on these boards, which have served as official tuberculosis agencies.

The first sanatorium in the United States, which opened at Asheville, North Carolina in 1875, was operated by a physician in private practice, as was the Adirondack Cottage Sanitarium opened 10 years later at Saranac Lake, New York. In practically every sanatorium since there has been on the medical staff 1 or more part-time physicians and consultants who were devoting most of their time to private practice. Moreover, private physicians have done a vast amount of work in tuberculosis clinics and in general hospitals.

Special Studies by Physicians in Private Practice

In several places physicians in private practice have conducted special studies on tuberculosis in addition to their routine office and hospital practices. Probably the first tuberculosis survey by private physicians was initiated and conducted by Simons and Hilleboe.[2] From their private office in the village of Swanville, Minnesota, with a population of approximately 500 people, they conducted a survey in the village and countryside beginning in the spring of 1930. Using the tuberculin test, X-ray film, laboratory, etc., they found 19 clinical cases of tuberculosis, while the veterinarians of the area who joined in the project found 18 infected cows which were providing milk for the local creamery. Time, work and expense were donated by these 2 private physicians. Following their report it was said that the work of these physicians "includes no new procedure, merely the consistent use of all known methods of control including the coöperation of the veterinarians. As an example of what can be done in a rural community the report is unparalleled and should be the means of arousing interest in tuberculosis in other communities similarly situated."

Medical societies composed mainly of physicians in private practice have initiated and conducted all-out tuberculosis programs. In 1941 the Meeker County (Minnesota) Medical Society with Dr. Karl Danielson,[3] Chairman, offered the tuberculin test to every citizen in the County with X-ray film inspection of the chest of each reactor and complete examinations of those who presented shadow-casting lesions. Although this survey was discontinued because of World War II, when only two-thirds of the citizens had been tested, 22.8 per cent of those tested had reacted to tuberculin and 16 previously unknown cases of clinical tuberculosis were found. This first County-wide program received a great deal of local, state and national publicity. In fact, in the spring of 1942 *Collier's Magazine* sent a representative who published an article with illustrations in color entitled "Worth More Than a Cow" on May 2, 1942.

Physicians practicing in McLeod County, Minnesota, with Dr. C. G. Sheppard as Chairman, instituted a County-wide tuberculosis control program in the fall of 1943. These physicians had previously done a considerable volume of tuberculosis control work in the County and had the confidence of the citizenry. A committee consulted the County Commissioners with reference to financial aid and were granted an annual sum (any amount necessary) to carry out the project. Apparently this was the first time in this state that county commissioners were asked for financial support for a county-wide tuberculosis control program among people.

In the 1950's physicians mostly in general practice in 3 counties in coöperation with various organizations and the entire citizenry conducted county-wide tuberculin testing with appropriate follow-up examinations and epidemiology. In other areas such programs were conducted in communities, townships, etc. In all of these projects from 71 to 90 per cent of the citizenry responded, of whom approximately 20 per cent reacted to tuberculin.[4]

In one county where the entire citizenry was offered the tuberculin test there had been a recent movement to discontinue all tuberculosis work including the Christmas Seal sale because so few new cases and deaths were being reported. However, Mary Goddard, R.N., County Public Health Nurse, especially well informed on tuberculosis, strongly advised that before taking such action the true situation be ascertained. County-wide testing revealed that tubercle bacilli were being harbored by 21 per cent of the population. The physicians explained that each reactor was a potential case of clinical disease and that the few who had broken down in recent years, 4 in 1953 and 3 in 1954, had come from the group of reactors. Moreover, it was pointed out that the 21 per cent of present reactors would provide more clinical cases in subsequent years. This was later demonstrated. From 1955 to 1962 inclusive 12 clinical cases and 1 death were reported. Only the tuberculin test could have revealed the true situation and thus restored confidence in the importance of continuing tuberculosis eradication activities.

These and more surveys were conducted as public services by local private physicians, who did all work gratis. No material or equipment was imported. Thus, it was demonstrated to the public that the private physicians of these areas are capable of doing all phases of tuberculosis work. Best of all, the surveys alerted not only physicians but also the entire citizenry of a method that can lead to the eradication of tuberculosis. These surveys were conducted as demonstrations; thereafter physicians continued to administer tuberculin tests in their private offices and to carry through with the reactors. Citizens who reacted to the test during the survey requested periodic X-ray film inspection of their chests while non-reactors reported to their physicians for periodic tuberculin tests. In fact, Dr. Sheppard has reported having administered approximately 4,000 tests in his private office.

I am unalterably opposed to the tuberculin-testing survey operated by imported "experts" who ignore and discredit the practicing physicians of the area. At the close of such a survey they disappear, leaving nothing to perpetuate the eradication program. The data obtained by such surveys do not justify them. The practicing physicians of the community should be the principal participants in all such surveys. Confidence by the citizenry in the ability of their local physicians to carry on tuberculosis eradication work will become established.

In St. Louis County, Missouri, the Academy of General Practice, composed of 200 physicians, launched a tuberculin-testing program in the schools of the City and County in 1951. This program has since been in continuous operation.[5] From the beginning until the end of the school year 1961, 364,828 tests were administered, and 3.7 per cent of the children reacted. During that time seeking sources of reactors led to discovery of 66 clinical cases among students, contacts and personnel. This testing project was carried out as a public service by the members of the Academy of General Practice.

Numerous other similar projects in which physicians in private practice have participated have helped immensely in tuberculosis control. In all such programs physicians have not worked alone but in coöperation with the nursing profession, luncheon clubs, health departments, veterinarians, social service workers, tuberculosis associations, etc. The response of the citizenry has been of great importance. It has been extremely fortunate to have the National Tuberculosis Association with its affiliated state, municipal and county societies carry information about tuberculosis to the public in every nook and cranny of this country. Without a well-informed public the physician often is greatly handicapped in his efforts to convince individuals and families of the importance of various diagnostic, therapeutic and preventive procedures.

Private Physicians as Educators

Physicians in private practice have played an important educational role. They have many contacts with people when they are most susceptible to health teaching. It is a well-known principle in pedagogy that the best time to teach is when people are personally interested in a subject. There are few times when members of families become so interested in tuberculosis as when it attacks one of their members. That is when the physician has his best opportunity to teach. The bulk of tuberculosis teaching to students of nursing and medicine has been done by physicians in private practice devoting part-time to professional schools.

Tuberculosis Control Accomplishments

Throughout the decades tuberculosis control accomplishments have been phenomenal. In 1900 the tuberculosis mortality rate in the United States was 194.4 per 100,000 population. The highest rate for any age group was 311.6 among infants under 1 year old. Next was 294.3 at ages 25–34 years; and persons from 75 to 84 years were third with the rate of 279.3 per 100,000. By 1940 the rate for all ages was 45.9; for infants under 1 year, 25.6; for adults 25 to 34 years old, 56.3; and for those aged 65 to 84 years, approximately 80.0. In 1961 the rate for all ages was 5.7; for infants under 1 year, 0.5; for persons 25–34 years old, 1.8; and those for 75 to 84 years old, 34.4. In 1961 the mortality rate for women of all ages and races was 3.3, but for men it was 8.2.

Although accomplishments have been phenomenal, we still have a tuberculosis problem of great magnitude. In 1961 there were 10,470 deaths, 53,623 newly reported cases, and an estimated 40 to 50 million with primary tuberculosis. It was reported that in the entire world there were over 5 million deaths, 15 to 30 million infectious cases, and approximately 500 million children harboring tubercle bacilli. In the United States and the world as a whole tuberculosis now causes more incapacity and death than all other contagious diseases combined.

Physicians Learned to Solve Their Own Tuberculosis Problem

Tuberculosis has taken a large toll among students and graduates in medicine. From 1885 to 1920 large numbers were treated at the Adirondack Cottage Sanitarium, later the Trudeau Sanatorium. As late as 1920 to 1953, 647 (9.49 per cent) of the patients who entered that institution were medical students and physicians. Large numbers were also treated in homes and other sanatoriums throughout the land. In one school of medicine, among the classes of 1919 to 1932, 92 (7 per cent) developed demonstrable clinical tuberculosis while in school or soon after graduation, 11 of whom died from this disease. It was pointed out that a profession that could not solve the tuberculosis problem among its own members scarcely deserved public confidence in attempts to eradicate the disease in all segments of a population. However, beginning about 1928 methods designed to solve this problem in schools of medicine were instituted. The method that proved effective consisted of testing with tuberculin all students on admission, examining the reactors including X-ray films of the chest immediately and every 6 months thereafter, and retesting the nonreactors with tuberculin every 6 months. For those who converted in each 6-month period a careful history of their whereabouts during that time was reviewed; thus, it was usually possible to trace to the source of infection. Some were found as unsuspected cases who had been admitted to general hospitals without admission examination. Where teaching was done in affiliated hospitals students were tested just before leaving for those institutions and within a few weeks after they returned. This procedure revealed that sizable numbers were being infected in some of these institutions, whereupon the directors of those institutions were asked to render them safe for students or discontinue the affiliation.

In general hospitals all patients were examined on admission. Preëmployment examination was required for all personnel members, and the entire hospital personnel were examined periodically. Rigid communicable disease technique was instituted in the care of contagious cases of tuberculosis, and thus medical students were protected from invasions of tubercle bacilli. These procedures promptly resulted in a tumbling down of the number of tuberculin converters and the corresponding number of clinical lesions and deaths from tuberculosis. In that particular school only 1 case of clinical tuberculosis has developed in the past 20 years. His lesion was detected in 1946 while in the minimal stage and was promptly brought under control with only a brief loss of time. Since he had been known to be a reactor to tuberculin since the age of 14 years, the school had no responsibility in the development of his lesions. This method has been found equally effective elsewhere[6] and is adequate to solve the tuberculosis problem among students of nursing and medicine wherever it is employed.

Pathogenesis

Knowledge of the early pathogenesis of tuberculosis greatly facilitates the visualization of the eradication goal. When tubercle bacilli invade the body by any portal of entry (digestive or respiratory tract, conjunctiva or skin abrasion) many are immediately ingested by neutrophils.[7] These white blood cells then enter the lymph and blood streams and with their tubercle bacillus content are lodged in various organs, including bones, brain, joints, kidneys, lungs, spleen, etc. This occurs within an hour after bacilli enter the body. Places where tubercle bacilli are lodged by the neutrophils are known as points of focalization. Promptly after focalization occurs some bacilli are carried to regional lymph nodes where they are entrapped. At the original points of focalization and around the bacilli deposited in lymph nodes lesions immediately begin to develop. The reaction of the adjacent tissues to these deposits of tubercle bacilli is nonspecific. In fact, the reaction is not different from that which occurs around recently deposited inanimate material of the particulate type, such as silica dust. Walls of monocytes and later of lymphocytes are built around the foci of tubercle bacilli. Soon the fixed connective tissue cells begin to proliferate so as to form capsules of fibrous tissue. Later calcium and even bone in many cases encapsulate the tubercle bacilli. The lesion at the point of an original focus and those in the regional lymph nodes constitute a primary tuberculosis complex.

Inasmuch as the original reaction is nonspecific there is very little destruction of tissues in the formation of lesions of primary complexes. In the majority of cases they result in no serious symptom and the involved areas are not detectable by the conventional physical examination including X-ray film inspection of the chest. However, within about 6 or 7 weeks after the initial invasion occurs, the tissues of the body including the skin have become sensitized to the protein fraction of tubercle bacilli.

Endogenous Reinfections

While lesions of primary tuberculosis complexes are exceedingly benign and the majority of them result in no extensive destruction of tissues or serious illness throughout the span of human life, the remainder provide the setting for all of the incapacity and death from tuberculosis in the human family. This is because the tubercle bacilli, even though completely encapsulated, may remain viable and virulent over long periods even throughout the lifetime of their hosts. In a minority of persons who develop primary tuberculosis complexes before the walling off process is completed some tubercle bacilli may escape from the points of focalization and set up areas of clinical disease. More often, however, after fibrous calcific and osseous capsules completely encase the tubercle bacilli, nature paradoxically resorbs walls of capsules and liberates the previously imprisoned organisms, which set up infections on the tissues, where they gain lodgment. This is known as endogenous reinfection.

The new implantations of tubercle bacilli from the original primary foci are on tissues that have become allergic (sensitive) to tuberculoprotein. In fact, the protein liberated from these organisms is exceedingly poisonous to these tissues because of their allergic state, and thus the protein destroys the cells and tissues. Therefore, the bacilli which cause such benign disease in the beginning on nonsensitized tissue now cause destruction of sensitized tissue. Thus, there is a sharp dividing line between the primary type of tuberculosis which is so benign and the endogenous reinfection type which results in clinical progressive tuberculosis. This dividing line is between the nonallergic and the allergic states of the tissues.

The form the reinfection or clinical type of disease takes depends mostly upon the location of the foci of tubercle bacilli whose capsules are resorbed. If in the central nervous system adjacent to ventricles of the brain or the subarachnoid space, liberation of tubercle bacilli and implantation on these allergic tissues result in meningitis.[8] If a focus lies subjacent to pulmonary pleura, liberation of its bacilli into the pleural channels or directly into the pleural space on sensitized tissue causes pleurisy with effusion. Pericarditis, peritonitis, and synovitis may result from nearby foci of tubercle bacilli which are liberated and implanted on these tissues. Benign foci in lymph nodes and elsewhere may liberate bacilli into lymphatic or blood vessels and be responsible for miliary dissemination.

On the other hand, if tubercle bacilli are liberated so as to be implanted in lung, kidney, or other tissues, they may result in chronic disease of these organs.

Diagnosis of Primary Tuberculosis

Because of the sensitivity to tuberculoprotein, which tissues manifest about 3 to 7 weeks after invasion of tubercle bacilli, one is able to identify persons in whom such invasions have occurred by bringing tuberculoprotein in contact with the deeper layers of the skin. This protein is present in original tuberculin (OT) and in purified protein derivative (PPD). These preparations are equally potent. When either is introduced into the layers of sensitized skin a reaction occurs which when inspected in 48 to 72 hours consists of edema or induration or both. This usually, but not always, is surrounded by an area of erythema which is not considered a part of the reaction. It was this reaction which Ghon[9] found so specific in his classical postmortem studies. This reaction results regardless of the method of introducing tuberculin into the layers of the skin. Thus, without the individual presenting the slightest abnormality by way of symptoms, physical signs, or X-ray film shadows, the physician knows from the tuberculin reaction that tubercle bacilli have taken refuge in the body and have produced multiple microscopic lesions in various organs. When one sees the child or the adult who reacts to the tuberculin test with no other detectable evidence of tuberculosis, one is at a loss to know whether the individual belongs to the majority in whom clinical disease will not evolve or the minority in whom clinical disease will develop. The only safe procedure, therefore, is to recognize the true value of the tuberculin reaction and periodically examine all adult reactors.

Approximately 85 to 90 per cent of the cases of clinical tuberculosis are pulmonary. Therefore, X-ray film inspection of the chest is the most important part of periodic examinations of persons who react to tuberculin. However, one must not become impatient when making X-ray inspections of the chests of large numbers of tuberculin reactors for the first time to find such a high percentage with chests entirely clear. At times there has been a tendency for physicians to interpret "negative" X-ray findings as a discredit to the tuberculin reaction. This reaction is far more delicate and accurate in detecting the presence of tuberculosis than the X-ray film. This statement is justified by the well known discrepancies of the film. With the usual posteroanterior X-ray film exposure only 75 per cent of the lungs is visualized. The remaining 25 per cent is hidden from view by the dense overlying shadows of such organs as the heart and diaphragm. Lesions of most primary tuberculosis complexes are not so located or are not large enough or do not have sufficient consistency to cast visible shadows. In fact, in only 5 per cent or even less of the persons who have recently developed primary tuberculosis complexes does the X-ray film aid in locating them. Moreover, during subsequent years calcific deposits become large enough and are so located as to cast visible shadows in only about 20 to 25 per cent.

Periodic X-ray Films of Chests of Adult Reactors Imperative

In those persons who react to tuberculin and in whom chronic reinfection type of clinical tuberculosis develops, X-ray film inspection of the chest periodically is far superior to other phases of the examination. In fact, X-ray films record shadows of lesions on an average of 2 or 3 years before other clinical evidence of the disease is manifest. Moreover, shadows of lesions may be seen on X-ray film long before tubercle bacilli are being shed from the areas of disease. Treatment instituted at this time nearly always prevents dissemination of tubercle bacilli and also prevents the host from becoming incapacitated.

Eradication of Tubercle Bacilli

For more than a third of a century we have possessed the armamentarium necessary to eradicate tuberculosis. During that time on numerous occasions addresses have been delivered and papers and books have been published calling attention to the feasibility of adopting an all-out tuberculosis eradication program. Nevertheless, the costly time lag has prevailed. However, the hope of ultimate eradication has recently brightened with the dawning of the day when the phrase "tuberculosis control" is becoming obsolete and is being replaced by the term "tuberculosis eradication." The eradication phase will be far more difficult and time-consuming than the control phase has been. Therefore, the responsibility which now devolves upon the medical profession is enormous. This becomes especially obvious when one weighs the fact that only physicians are licensed to do the diagnostic and therapeutic work in the tuberculosis eradication program which involves each of our 188,000,000 people. While there have been excellent and convincing demonstrations of procedures necessary to eradicate tuberculosis, there has never been concerted effort to exterminate the tubercle bacillus in a single county or even a township of this nation.

Inasmuch as only the tubercle bacillus causes tuberculosis, eradication implies extermination of this organism in each of its pathogenic types. Physicians in private practice who are not already armed must arm themselves with information about the tubercle bacillus and procedures necessary to eradicate it.

Armamentarium Available for Eradication

Because research since 1880 has endowed us with information concerning tuberculosis and with other armamentaria our equipment for eradication is adequate. We know the cause of tuberculosis and how tubercle bacilli leave the bodies of diseased persons and animals and which portals they enter previously uninfected bodies. We know how to identify tubercle bacilli in the laboratory. We know the disease develops in 2 distinct phases, of which the primary is exceedingly benign but prepares the way for the endogenous reinfection stage by sensitizing the tissues to tuberculoprotein and providing the bacilli for the reinfection. We know that it is the sensitivity of the tissues which makes the tubercle bacilli destructive. We know it is the same sensitivity which makes the diagnosis of tuberculosis possible through the tuberculin test within a few weeks after an infection occurs. We know that throughout the present span of human life the majority of persons who develop the primary type of tuberculosis escape endogenous reinfection. However, among those with primary tuberculosis are all of the persons who have or will develop clinical disease. We know communicable disease technique now employed is efficacious in preventing the dissemination of tubercle bacilli. We know first-rate antituberculosis drugs are now available and second-rate drugs are useful in the event those of the first-rate are not satisfactory for one reason or another. We know that these drugs suppress tubercle bacilli, giving the natural defense mechanism a better opportunity to control the disease and often to make resection of lesions possible. We know that drugs do not destroy all tubercle bacilli in any given case of tuberculosis and that the surgeon cannot remove all lesions. Therefore, the need for follow-up of all persons who have been benefited by the best treatment of the day is imperative. Moreover, we know that we are still lacking a cure for tuberculosis in the sense of destroying all tubercle bacilli, and hence the person who has responded perfectly to the best known treatment remains a potential case of clinical tuberculosis.

Deterrents

Although our knowledge of tuberculosis and how to eradicate the tubercle bacillus is adequate, there are deterrents which must be overcome before satisfactory progress can be made. One of the most serious handicaps is the definition of tuberculosis so long employed, which nearly always refers only to the reinfection clinical forms of the disease. Thus, tuberculosis has usually been recognized as a disease only after it has entered upon the last lap of its course. In reality the disease begins to develop within an hour after tubercle bacilli invade the body. Numerous exceedingly benign primary lesions develop. This extremely important phase in the evolution of tuberculosis has long been designated tuberculous infection because the host's tissues are sensitive to tuberculin, but most such persons have no symptom, no physical sign, and no X-ray shadow-casting lesion. Although this situation has been clarified by numerous pathologists beginning with Ghon,[9] the erroneous phrase "infection without disease" obtains. In reality such persons have as much tuberculosis as everyone who has died had at one time. An internist with a large practice stated that he had not seen a person with this disease during the past 2 years. It is probable that dozens of persons, each harboring billions of tubercle bacilli, were examined in his office during that time but were not identified as tuberculous because they had no symptom and X-ray films of the chest revealed no evidence of disease. Each of these persons, however, could have been identified and properly classified as tuberculous had the tuberculin test been administered. This is also emphasized in the fact that of the more than 50,000 new cases of tuberculosis reported in the United States each year 75 per cent or more are in an advanced stage when first reported.

Tuberculin reactors harbor numerous small foci of tubercle bacilli which have been likened to land or sea mines or machine-gun nests. Persons in whom the foci reside have been accused of carrying concealed weapons. The weapons are dangerous not only to their hosts but to their hosts' associates. In 1962 more than 54,000 persons in the United States were afflicted by their own dangerous weapons, of whom about 43,000 were in an advanced stage when reported. Thus, the disease had reached the last lap of its course before it was brought to light. All of these persons could have had their disease diagnosed when the only evidence of its presence was the tuberculin test.

Another serious current deterrent is the complacency of our citizenry, and even of professional workers, which has been generated by the accomplishments in tuberculosis control as manifested by the decrease in morbidity and mortality over the past few decades. Physicians in private practice should be able to overcome this complacency by emphasizing the fact that the remaining tuberculosis in the United States will require more time, money and effort than have been spent on this disease in the past.

Outright closure of sanatoriums greatly delayed eradication programs. A few years ago a movement got under way for closure of sanatoriums. Many such institutions were abandoned outright and their facilities were used for other purposes. The problem of great significance which was ignored or overlooked was eradication of tubercle bacilli from the area which the sanatorium had served. This was another blow at the tail of tuberculosis while leaving the head unmolested in the areas which the closed sanatoriums had served.

In one state which had operated 15 state and county sanatoriums for decades, all of which were playing significant roles in the eradication program, 10 were closed outright. Not even a clinic was left with experienced personnel to reëxamine formerly treated patients, to locate the persons of all ages in whom tubercle bacilli had taken refuge, to periodically retest all others to locate the tuberculin converters, and to regularly examine all tuberculin reactors.

If most physicians in private practice have a recognized tuberculosis leader, they will carry out his recommendations to the nth degree. Therefore, in the 10 areas in which all tuberculosis work was brought to a halt by closing sanatoriums beginning in the early 1950's and continuing through 1962, the error originally pointed out has now been generally recognized, and efforts to make partial restitution are under way with the hope of providing leaders for the physicians in private practice of these areas. Many medical directors of sanatoriums now closed provided superior leadership. For example, Dr. S. A. Slater, Medical Director of an 8-county sanatorium district in Minnesota, and L. L. Collins, who directed 3 county sanatoriums simultaneously in Illinois, understood the work of physicians in general practice and their problems as well as their superior importance in the control of tuberculosis. They realized that most of the diagnoses of tuberculosis in their sanatorium districts would be made by physicians in private practice. Therefore, on admission and throughout residence in these sanatoriums patients heard their family physicians praised. During their stay in the institution sanatorium physicians kept in close touch with the family doctors by correspondence and telephone and invited them to visit their patients frequently. In advance of discharge they informed physicians that their patients were returning home and that full responsibility for post-sanatorium care would rest upon them. On discharge patients were advised to keep under close observation of their physicians with frequent periodic examinations. Thus, the patients returned to their homes with every confidence in the ability of the physicians who had diagnosed their disease.

These medical directors were firmly convinced that every physician in each of the counties should actively participate in the tuberculosis eradication program. When their work began some of these physicians had never administered the tuberculin test. They were not only invited but urged to attend and assist in administration of tuberculin tests in the schools. Soon all physicians in these sanatorium districts were administering this test routinely to persons of all ages. Therefore, the offices of these physicians were and continued to be tuberculosis centers in which the latest information on diagnosis, treatment and prevention obtained. The effectiveness of this close coöperation between the medical directors of sanatoriums and physicians in private practice of the entire area served was demonstrated by the tumbling down of mortality, morbidity and infection attack rates. Such leadership needs to be restored.

Lack of funds to carry out the tuberculosis eradication program continues to deter progress. There is no place where funds have been sufficient to conduct an adequate program. The amount of money derived from Christmas Seal sales has been only a modicum of what is necessary. Apparently no one has had the courage or the ability to organize a nation-wide all-out tuberculosis eradication program with adequate funds, as the veterinarians did in the second decade of this century.[10]

The project of administering the tuberculin test to all citizens of the United States with appropriate follow-up work of nonreactors and reactors was especially outlined and recommended in 1937. At that time the mortality rate was 55 per 100,000 and it was estimated that approximately 50 per cent of the population of 129,257,000 was harboring tubercle bacilli. It was then pointed out that the reactor half of the population would need to be retested only about once in 5 years. However, for nonreactors this should be done annually, and tuberculin reactors both on initial and subsequent testing should have chest X-ray films annually. It was said, "Indeed, the total cost of the tuberculin testing and X-ray examination of the entire population of this nation can be done for one-half of what we are now spending annually for the hospitalization of patients whose disease was detected by old methods after it had become so advanced that long periods of institutional care are necessary and the patient's best chances of complete recovery are lost." Although this recommendation was made 26 years ago the costly time lag is still operating. Thus, the problem remains for solution.

Since 1937 some conditions have changed. For example, our population has increased to 188,000,000 with a present annual increase of approximately 2,000,000, but the incidence of tuberculous infection has decreased. However, the necessary eradication procedure remains the same as in 1937, which means that each of our citizens must be initially tested with tuberculin. On the basis of sample mass tuberculin-testing probably about one-fourth would react (47,000,000). There would remain 141,000,000 persons who are not harboring tubercle bacilli and therefore do not react to the test. It would be necessary to retest the nonreactors to the first test in order to identify converters, who should be placed on the list with those to be periodically examined. Since the number of converters should decrease rather rapidly between testing periods the volume of testing done periodically would continue at a high level. Indeed, it would actually increase as generations of children are protected so as to provide few or no reactors. Since individuals of the older generation, so many of whom are now infected, die, practically the entire population would need periodic tuberculin-testing.

It has been estimated that tuberculosis is now costing the United States $750 million annually, but, if all items were included this figure probably would amount to a billion dollars. This cost is largely due to neglect to use our long-known and available armamentarium. A sizable part of the present expense is devoted to treatment and hospitalization because the disease was not found in so many cases until it had reached the last lap of its course.

With the all-out eradication program the cost of hospitalization and treatment should markedly decrease within the next decade or so. This will be the result of protecting our citizenry against initial invasions with tubercle bacilli and finding the disease in others before hospitalization and long periods of treatment are necessary. Thus, in the long run the present project will not only preserve and prevent incapacity and death but will insure an economic value such as the world has never seen.

However, our immediate task is to convince tuberculosis workers everywhere and legislators that we cannot immediately stop or greatly reduce the cost of hospitalization of those who were neglected in the past; therefore, sizable additional sums of money will be necessary to carry out the testing and retesting with appropriate follow-up procedures to be conducted community by community throughout the nation. This cost will be far less than the present cost of hospitalization and treatment and ultimately will be the only cost when hospitalization and treatment are no longer needed. Inasmuch as diagnosis and treatment of tuberculosis are responsibilities of physicians, it is they who, although belatedly, should participate actively in initiation and perpetuation of the nation-wide tuberculosis eradication program. In this program physicians in private practice must do the bulk of the work. It is no longer a matter of trial and error, since sound effective techniques have been devised and practiced.

To administer the tuberculin test to 188,000,000 persons requires a large volume of work. It cannot all be done within a few months. It must be done community by community throughout the length and breadth of the country, and thus it becomes a project well within the range of physical possibility. This also applies to follow-up work including repetition of tuberculin test, etc. In the 1920's a considerable percentage of physicians frowned upon tuberculin-testing on a large scale by nurses. Only those working in private physician's offices and in some clinics were permitted to administer tuberculin and read reactions. However, after Dr. W. L. Rathbun, Medical Director, Chautauqua County Sanatorium, New York, delegated extensive tuberculin-testing to nurses and found that the administration and reading of reactions were satisfactory in every respect, more and more tuberculin-testing was intrusted to public health nurses in different parts of the country until now a great deal of the testing is done by these professional workers under the direction of physicians. Thus, as the nation-wide tuberculin-testing program proceeds the nursing profession should continue to play an ever-increasing role in ultimately accomplishing eradication.

Highest Eradication Priority Belongs to Children

If tuberculosis is to be eradicated, children must receive the first consideration. This is because they are all born free of tubercle bacilli. Whenever we allow an infant or a young child to become infected the eradication goal is no nearer than the end of their lives, an average of about 70 years. The program requires considerable prenatal work by way of administration of the tuberculin test to parents, immediate relatives, maids, and all others including neighbors who frequent the homes, as well as hospital personnel for those to be born in hospitals. All such persons to be in the homes or hospitals who react to tuberculin should be completely examined in order to make sure that no person with contagious tuberculosis comes in contact with the newborn child. It has not been unusual in the past for a mother, father, grandparent, or an elderly person in the neighborhood, a maid, a farmhand, a nurse, or even a physician to infect babies during the first few days of life. The environment free from tubercle bacilli so created should be continued as the child grows older and as long as he remains in the home. Most of this work will need to be done by private physicians in general practice, obstetricians and pediatrists. The seriousness of a tuberculous infection occurring in an infant or young child justifies all effort necessary to prevent it.

As the child attains kindergarten age and is in contact with more adults outside the home the private physician has the responsibility of making certain that the school environment is also free from contagious cases of tuberculosis. This requires effort on the part of the private physician to convince members of school boards and health department officials of the importance of establishing such an environment.

Certification of Schools

The Committee on Tuberculosis of the American School Health Association (Dr. A. O. De

Weese, Executive Secretary, Kent, Ohio) working in close coöperation with the national and state tuberculosis associations instituted a project about 1940 which greatly facilitates tuberculosis work of the private physicians among children of school age. Qualifications were set up whereby individual and systems of schools could receive official certificates signed by the president and secretary of the American School Health Association, the executive secretary of the State Tuberculosis Association, and the chairman of the state's Committee on Tuberculosis of the American School Health Association.[11] To qualify for such certification at least 95 per cent of the children from kindergarten through high school must be tested with tuberculin along with 100 per cent of school personnel. The high school students and members of personnel who react to the test must have X-ray film inspection of the chest. Those with shadow-casting lesions are then completely examined to determine etiology. If progressive tuberculous lesions are found, their hosts are immediately removed from school and not permitted to return until recommended by their attending physicians. In order to keep the certificate valid, examination including tuberculin test must be repeated every 2 years for all who were nonreactors on the first and subsequent testing. In schools where certification has been employed, a previously unheard of understanding of tuberculosis by personnel and children and the entire community has been displayed.

Searching for the persons responsible for the tuberculin reactions in schools and in communities has led many persons to inquire why such a project is limited to the schools. Furthermore, in a number of places special requests have been made to extend the program into entire communities.

Personnel members of schools have a powerful influence in their communities. Through the School Certification Project by actual participation they become well informed on the fundamentals of tuberculosis and its prevention and with the occasional exception become strong advocates of fundamental measures leading to the eradication of tuberculosis.

In the Certification of Schools Project physicians in private practice have played an exceedingly important role not only by recommending that the citizenry support the project, but also by participating in all phases of the examinations in the schools and seeking sources of infection in children among adults in the communities. Physicians in private practice can play an especially outstanding role in tuberculosis eradication by arranging for the Certification of Schools Project in every community of the nation. This would soon extend so as to involve the entire citizenry from birth through senility. Thus, in protecting the infant and child against tuberculosis it is obvious that a complete tuberculosis program must be operating in the area.

It is obvious that tuberculosis will not be eradicated in any community, county, state or nation until one generation of children after another has gone through life free from tubercle bacilli, hence the importance of giving tuberculosis work among infants and children highest priority. This obviously means they must be protected from infection of all adults who have contagious disease.

Private physicians in whom individuals and families have manifested so much confidence desire to retain that confidence of their communities, not only throughout the school years of the children but also by helping to arrange for environments free from contagious tuberculosis in colleges and universities, which are already conducted so well in some such institutions.[12] Such environment can be established and promoted for those who do not go to college in the places where they live and work.

An important problem has developed in colleges and universities with reference to students from countries where little has been done to control tuberculosis. In at least 2 large universities where only approximately 3 per cent of the students are from such countries 70 per cent react to tuberculin, whereas 10 per cent or less of United States citizens react. In these institutions the 3 per cent of foreign students provide about 60 per cent of the clinical cases of tuberculosis.

Obviously, more persons are examined by physicians in private practice than by any other group. In this activity those in general practice are far in the lead. They are the family physicians of the nation who are so important in maintaining good health of our citizenry. This was recognized by E. L. Trudeau when he said: "On the general practitioner and the dispensary physician rests the great responsibility of detecting the disease in its incipiency. It is to them and not to the specialist that the patient first applies." Sir William Osler in his "last word message" to general practitioners said: "The leadership of the battle against this scourge is in your hands. Much has been done, much remains to do. By early diagnosis and prompt systematic treatment of individual cases, by striving in every possible way to improve the social condition of the poor, by joining actively in the work of the local and national antituberculosis societies you can help in the most important and the most hopeful campaign ever undertaken by the profession." R. N. Barr, Secretary and Executive Officer of a state department of health, in reference to the private physician recently said: "It is he who is our first line of defense to eradicate tuberculosis."

The medical profession has the ability and license to diagnose and treat disease that no other group of citizens possesses; therefore, it is not only a privilege but a responsibility for all physicians including those in private practice to put forth every necessary effort to eradicate the tubercle bacillus.

We must guard against items that might justify criticisms. Occasionally one hears the physician in general practice criticized because of his tuberculin-testing technique including discrepancies in reading reactions by 2 or more physicians. This has been reported in some places as great as the discrepancy in X-ray readings of 2 or more physicians. It has also been observed that discrepancies occur when the same physician rereads tuberculin reactions a few hours after his first reading. Emphasizing and publicizing such discrepancies only harms the eradication program. Indeed, where they occur they can easily be corrected. Usually they are due to inexperience in reading tuberculin tests. This problem should be easily solved by the physician spending some time with and assisting in the administration and reading of tuberculin tests with an experienced physician. After all, any physician who has not administered the tuberculin test can quickly acquire the technique. It is of great importance that a rapid, simple method of administration and reading be employed so as to conserve the time of exceedingly busy physicians in private practice.

Not infrequently physicians have been accused of working only for fees despite the fact that numerous community and county-wide demonstrations have been conducted in which all physicians donated their time. The belief probably originated from the occasional physician of whom this is true. For example, in one county-wide tuberculosis survey all physicians of the county manifested enthusiasm during preliminary organizational meetings for promotion of the project; however, one who was under the impression that he would receive 5 to 10 dollars for each chest X-ray film made in his office floated off the scene when informed that he would be paid only the actual expense of making each film with no fee for his interpretation.

As physicians in private practice we must recognize that the eradication of the tubercle bacillus deserves the attention and effort of everyone. Therefore, no organization or group of individuals local or national should work independently and vie for publicity indicating superiority over others. In too many places organizations designed to fight tuberculosis devoted much of their time to fighting one another. In a city where 3 tuberculosis organizations were at each other's throats a physician in private practice converted chaos into peace and quiet, after which outstanding progress was made in a united effort against tuberculosis without anyone being hurt.

The efficiency of many individual tuberculosis organizations has been impaired by internal strife caused by jealousies and inability of one or a few persons to obtain support of proposed fads, fancies, etc. In 1963 an executive director of a prominent state tuberculosis association said: "I do think we have been fiddling and fuddling around in a most uncertain way for the past 5 or 10 years and that we now must move quickly and positively ahead. Otherwise more and more gaps will develop and we will find it increasingly difficult to again develop momentum." Obviously he was referring to the common practice of organizations doing this year what they did last year and next year what they did this year. Physicians in private practice may be partially responsible for this unfortunate situation for not having provided medical leadership. This can be done in part by preparing and publishing articles in medical and public health journals, reporting interesting cases, and even writing occasional information letters for newspapers.

For several years there has been alarming sparsity of articles on tuberculosis in the medical and veterinary journals. Even in some specialty journals, at one time devoted almost exclusively to tuberculosis, the number of papers pertaining to this disease now being published is extremely limited. This is not because of unwillingness of editorial boards to approve such papers but to failure of physicians to prepare them. This failure of veterinarians and physicians is due largely to dangerous complacency. Not too long ago publicity concerning tuberculosis was centered around the funeral home. As mortality decreased it centered around the hospital. There are still plenty of deaths and illness to justify continuance of such publicity. However, we are now in the era when much publicity must center around the tuberculin reaction, since persons with nothing demonstrable but this reaction, if not identified and kept under surveillance, are candidates for the hospital and the funeral home.

This and much more the physician can do to provide stimulation and ammunition for tuberculosis organizations. They are exceedingly important societies in the eradication program because they play a unique educational role. Many physicians who are not in private practice have done much to promote the tuberculosis eradication program. They serve in various capacities such as full-time sanatorium staff members, teachers in medical schools, directors of chest clinics, etc. Many are leaders and thus are extremely helpful to physicians in private practice.

Physicians must keep in mind that state and local health departments are the only organizations with legal authority. These organizations can make rulings which operate as laws. They are in a strong position to support desirable bills submitted for consideration of legislators. Already in a number of states laws have been enacted which provide for preëmployment and periodic examinations for tuberculosis of all school personnel. It is important that physicians work closely with health officers and thus support their tuberculosis control programs. With this in mind a Compendium of State Regulations and Recommendations Concerning Tuberculosis Screening of School Children was published in 1962. From this publication physicians in the 50 states, District of Columbia, and Puerto Rico can readily learn of their health department activities. Physicians in private practice can be most helpful in the tuberculosis program of their health departments and vice versa.

About the end of the 19th century reporting of clinical cases of tuberculosis to health departments was initiated in a few places. This procedure increased and spread throughout the country until today there is probably no place in the nation where reporting of such cases to health departments is not required by law. This has been a tremendously valuable aid in the control of tuberculosis, since the health department is the official agency and can require isolation and treatment of persons with contagious disease, many of whom would otherwise refuse. Health departments have set up case registers where the names and addresses of previous and present clinical cases are readily available.

One of the most far-seeing city health officers this country has produced set up a tuberculin reactor registry in 1930. This register contained names and addresses of individuals, mainly children, who had been found to react to tuberculin but presented no evidence of clinical disease. This register was independent of the one containing data on persons who had been reported to have clinical tuberculosis. The tuberculin-reactor register was initiated and continued for 2 main reasons: (1) epidemiologic studies which consisted of seeking the adults who were responsible for the infections that resulted in the tuberculin reactions, and (2) periodic examinations for those reactors who had already attained or those who subsequently attained the age of 12 years since every tuberculin-reactor is a potential clinical case of tuberculosis and contagious pulmonary tuberculosis rarely develops prior to 12 to 14 years of age.

This procedure was so effective that in 1942 the State Trudeau Society (now the Thoracic Society) recommended that all persons who had no evidence except the tuberculin reaction be reported to the state board of health. However, the costly time-lag operated for the next dozen or more years before such registries were set up in other places. Such registries are rapidly increasing in number so that private physicians can now receive a great deal of help by reporting their tuberculin-reactors to boards of health.

Such registers bring to light the tremendous amount of tuberculin-testing done in private physicians' offices. Without them 100,000 tuberculin tests administered in the name of an organization receive a great deal of publicity while no mention is made of several times that number of tests given in private physicians' offices in the same area.

The veterinary profession and its allies have contributed mightily to the tuberculosis eradication movement. They administered the tuberculin test 433,321,837 times to the cattle of this country between 1917 and 1962. Moreover, they have made postmortem examinations of the 4,136,577 reactors. In fact, veterinarians know more about the tuberculin test and eradication measures than any other group of people in the world. Since 1917 they have reduced tuberculosis in the 99,500,000 cattle in this country to 12 reactors per 10,000 tested. Therefore, physicians in private practice can learn much from veterinarians in their areas. Veterinarians are just as interested in and willing to help eradicate tuberculosis for people as physicians working in medicine among humans.

Entire Citizenry Must Work in Unison

To eradicate tuberculosis, organizations and the entire citizenry must work in unison. In one state this has been largely accomplished by the Committee on Tuberculosis of the State Medical Association, recognizing that all organizations with tuberculosis programs have important parts to play which can best be done through coöperation and coördination.[13] Therefore, this Committee membership has included persons representing each of the organizations. The Committee, which began its work in 1924, has always operated in a most democratic manner. It has never been dominated by any one person or small group of individuals or any single organization. With all concerned the work of all groups has been so coördinated that they are usually working in harmony against the common enemy of mankind. This arrangement has permitted a very limited manifestation of selfishness and jealousy which could have led to people fighting people rather than the tubercle bacillus. It has permitted no one organization, such as the Tuberculosis and Health Association, the Thoracic (Trudeau) Society, or the State Medical Association, to dominate the program at the expense of the tuberculosis eradication movement. Every individual and every organization whose representatives have brought before the Committee worthwhile proposals have received its unanimous support.

Not only has the perpetuation of well-established valuable procedure been strongly recommended but also numerous important projects designed have been initiated by members of this Committee and promoted by the Committee as a whole.

This Committee does not claim credit for anything more than initiating and promoting projects and serving as a stabilizer so as to keep most all tuberculosis groups working in unison.

In 1960 3 meetings of the Committee were devoted to consideration of procedures that might be expected to accomplish most toward the solution of the tuberculosis problem. The 8 organizations that participated were the American College of Chest Physicians (state chapter), Department of Health, League for Nursing, Livestock Sanitary Board, Medical Association, Nurses' Association, Thoracic Society, and Tuberculosis and Health Association. Working together all of these organizations agreed upon various items and incorporated them into a manuscript which was published in the state medical association journal.

The operations of this Committee have been so successful over such a long time that such a committee is highly recommended for every state medical association.

Over the years tuberculosis control work in this country has been so effective that mortality and morbidity have been greatly reduced. Although 75 to 80 per cent of the more than 50,000 new cases reported annually are in an advanced stage, more effective treatment is now available. Moreover, the offensive attack on tuberculosis leading to eradication begins with the diagnosis of tuberculosis made by the tuberculin reaction with subsequent follow-up including immediate examination and, if clinical disease is not found, periodic examination as long as such disease is not detected. Thus, in this era the great bulk of the tuberculosis work can be done in the private physician's office. It must be repeated that without the private physician eradication of tuberculosis can never be accomplished.

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Tuberculin-testing in Private Practice*

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It has been well established that delayed cutaneous hypersensitivity to tuberculoprotein is the most precise indicator of the presence or absence of infection by the microörganism, *Mycobacterium tuberculosis*, both in laboratory animals under experimental conditions and in man under so-called natural conditions. Thus, the tuberculin skin test is useful to the physician in assessment of his patient in that it may assist him in the differential diagnosis of the 99 different pulmonary diseases which may mimic tuberculosis, by ruling in or out the possibility of tuberculosis. Also, it is of considerable value in indicating which patients with conditions known to be associated with the development of the active disease process, tuberculosis, should be most carefully observed. In the end, however, the tuberculin test only indicates which patient has been infected.

In such chronic, relatively indolent processes as tuberculosis, infection does not mean the same thing as disease. Infection with *Mycobacterium tuberculosis* means, although the parasite has arrived in the tissues of the host and has grown and multiplied, that it has produced insignificant changes and only slight destruction of tissue. When such infection has occurred, typical delayed cutaneous hypersensitivity to tuberculoprotein (tuberculin) appears. This skin test provides information about the infection, but it does not tell whether or not there is tuberculosis, the disease. The skin test does not tell whether or not the disease will ever be present, but there are excellent studies which show that the larger the reaction is, the greater the risk of the disease. For example, the study by Palmer[1] showed that in Navy recruits reactions greater than 10 mm. were clearly associated with development of the disease.

Tuberculin skin-testing surveys which have been carried out in Denver, Colorado, in industries, hospitals, and schools showed that about 35 per cent of the adult population were tuberculin-reactive (or positive), and that less than 6 per cent of the senior high school pupils and college students were tuberculin-positive. Furthermore, among adults, the older they were the higher was the proportion of tuberculin positives, up to age 65. These local figures are in line with the results of similar surveys conducted in urban areas all over the country. Therefore, the physician cannot afford to guess that his patients have a positive tuberculin reaction.

Similarly, it has been shown that the old aphorism, "once tuberculin positive, always positive," is not true. It has been proven in experimental animals that there is reversal of the tuberculin reaction at some time after the tubercle bacilli have been sterilized by chemotherapy. Similarly, in a study by Robinson et al[2] some children under 20 months of age became tuberculin-negative. However, among adult patients with proven tuberculosis this evidence has not often been confirmed.

On the belief that at least 50 per cent of your patients will be tuberculin-negative, and because of the importance of this information in guiding the medical care of patients (after subtotal gastrectomy, after the diagnosis of diabetes mellitus, hypothyroidism or any other hormonal problem, blood dyscrasias, and chemotherapy of malignant disease, as well as all who are to receive corticosteroids for whatever reason) most physicians should be doing tuberculin skin-testing in their offices at the time of the initial visit, and such skin-testing should be repeated at some reasonable interval.

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It is one matter to decide to perform a program of tuberculin-testing on your patients, but quite another matter to decide which method to use. First, there are the different kinds of tuberculin. Fundamentally, there are 2 types of tuberculin, Old Tuberculin and Purified Protein Derivative.

Old Tuberculin is a sterile solution of the concentrated soluble products of growth of tubercle bacilli adjusted to standard potency by addition of glycerin and isotonic sodium chloride solution. It is prepared by boiling, filtering, and concentrating a bouillon culture of *Mycobacterium tuberculosis*. As such, this material is far from pure, but it does contain the essential tuberculoprotein to which the skin reacts. There are several commercially available Old Tuberculins. These are not all equally good, but the best has been shown to equal PPD.[3]

PPD (purified protein derivative prepared according to the methods of Seibert) is a sterile, soluble, partially purified product of growth of tubercle bacilli prepared in a special liquid medium free from protein. This tuberculin is the generally accepted standard at the present time, but it is well recognized that it falls short of the objective of being entirely pure and free from materials which are not entirely specific for *Mycobacterium tuberculosis*.

There are, basically, 3 methods of doing tuberculin skin-testing. These are the Mantoux test, multiple puncture tests (like the Heaf test, and the Tuberculin Tine test—Rosenthal), and the Vollmer patch test. The Hypojet Spray test may not be useful in the private physician's office.

The Mantoux Test

The intracutaneous injection of 0.1 mm. tuberculin, as originally described by Charles Mantoux in 1910, has become the accepted standard method of performing the tuberculin skin test on human beings. Either Old Tuberculin or PPD may be used in several dilutions. It is important to follow carefully the instructions for dilution supplied with the tuberculin. Unless this is done little meaning can be attributed to the results. These tuberculins must be kept under refrigeration and away from light both before and after dilution.

The site usually selected for injection is the volar surface of the forearm below the antecubital fossa. One-tenth mm. of the suitably diluted tuberculin is injected superficially into the previously cleansed skin. It is important that a small wheal be formed. Furthermore, the test can best be read at 2 or 3 days after the injection. The method of reading this test is to measure the greatest dimension of the area of induration to the nearest mm. The technique of reading the Mantoux test is first to use the first 3 fingers of your better hand, passing them lightly over the area of the test. The purpose is to feel the test site for the presence of an area of induration. After confirmation of the presence of induration the skin is pinched so that the nonindurated skin and indurated skin are included between the thumb and tip of the index finger at one end of the greatest dimension. This is repeated at the other end of this greatest dimension. Next the induration so assessed is measured to the nearest mm. This measurement and the date should be recorded on the patient's chart.

The Mantoux test allows the physician to titrate the skin reaction. Thus, Old Tuberculin diluted 1:10,000, 1:1,000 and 1:100 can be used. Similarly, PPD first strength (1 Tuberculin Unit), intermediate strength (5 or 10 T.U.), and second strength (250 T.U.) may be used.

For most physicians the intermediate strength test (5 T.U.) will suffice. Either 5 T.U. of PPD or 1:1,000 Old Tuberculin (approximately 10 T.U.) injected into the superficial layers of the skin of the forearm yields an area of induration at the site of injection which measures at least 6 mm. in greatest dimension at 3 days in more than 97 per cent of patients with tuberculosis proven bacteriologically.

Consistency of the Mantoux test. This test is subject to uncontrollable variations which are the result of the method. First, the test varies with the person who gives the test. The depth to which the tip of the needle is introduced into the skin obviously is variable. This is so in spite of the best efforts of the physician or trained technician and is modified by the character of the skin of the person being tested. In addition, the amount of tuberculin injected is difficult to control. Since the advent of disposable plastic syringes this problem has been somewhat increased because many of the syringes are extremely difficult to wet. This means that often we fail to eliminate all of the air adjacent to the tuberculin in the syringe and so cannot be sure that we have delivered precisely the correct amount. In addition, a portion of the tuberculoprotein becomes adsorbed to the glass of the vial. Thus, there is some loss of potency. These variations result in apparent failures of agreement on retesting or on duplicate testing about 5 per cent of the time.[4] However, it is fair to state that this test has the best consistency of any medical skin-testing procedure, and it is certainly the most consistent of the several tuberculin tests presently available.

Sensitivity of the Mantoux test. By sensitivity we mean that the positive reactors indicated by the test are truly infected with some mycobacteria. In other words, is the method sensitive enough to show all true positives? The experience at National Jewish Hospital and at Fitzsimons General Hospital on 100 patients whose pulmonary disease had been shown bacteriologically to be attributable to *Mycobacterium tuberculosis* revealed that they all had areas of induration of 6 mm. or more at 2 days after the Mantoux test with 5 or 10 T.U., even though 2 of these patients previously and inexplicably had been negative on repeated testing with various similar tuberculins.

Sources of falsely negative results of tuberculin testing with the Mantoux technique in patients proven to be excreting *Mycobacterium tuberculosis* have been identified, at least in part. They are moribund state, intercurrent infections and cachexia, late pregnancy and the puerperium, hypothyroidism, systemic treatment with large dosage of corticosteroids, senility of the skin, rare cases resembling Boeck's sarcoid, and tuberculous infection of such short duration that skin hypersensitivity has not yet developed.

It is difficult to assess the frequency with which such falsely negative results of Mantoux-testing are encountered, but we believe that it does not exceed 2 to 3 per cent. Thus, we can say that the sensitivity of the Mantoux test with either PPD or O.T. is good.

Specificity of the Mantoux test. By specificity we mean that those who fail to react to the test are not infected by *Mycobacterium tuberculosis.* In other words, the test is specific for infection with *Mycobacterium tuberculosis.*

Sources of positive results of the Mantoux tste in the absence of infection with *Mycobacterium tuberculosis* are not well understood. First, infections with some other species of mycobacteria yield positive skin reactions to tuberculin. Such organisms are (1) the photochromogenic mycobacteria recovered in pure culture from patients with pulmonary disease resembling tuberculosis (*Mycobacterium kansasii*), (2) the organisms called Battey Type which may well prove to be a modified avian strain, (3) the avian organism, *Mycobacterium avium*, (4) the swimming pool organism, *Mycobacterium balnei*, and (5) some mycobacteria which have not been classified. These are all mycobacteria, and therefore these positive skin tests are false reactions only if we interpret this result to mean infection with *Mycobacterium tuberculosis.* A great deal of work being done is aimed at making the various tuberculins from these mycobacteria so specific that such false positives can be eliminated by a battery of tests.

Second, some batches of Old Tuberculin have been found to contain a staphylococcus cross-reacting antigen which may yield a true false-positive reaction in certain individuals. This skin reaction may not be elicited upon retesting with similar tuberculin from a different batch, or with a different type of tuberculin, or a tuberculin from which this cross-reacting antigen has been removed.

Third, some parasitic infections are suspected of producing positive tuberculin skin reactions.

It seems reasonable to assume that such cutaneous reactions to a tuberculin which was derived from *Mycobacterium tuberculosis* do not exceed 5 per cent, except in those areas where one of the other mycobacteria are unusually prevalent. In addition, the majority of such reactions are reported as measuring less than 10 mm. Thus, we can say that the specificity of the Mantoux test is, at least, fair.

Simplicity of the Mantoux test. There are 3 major disadvantages of the Mantoux test. First is the necessity of diluting the tuberculin. This must be done correctly, and, unless done by you, nagging doubt may arise in the face of an inconsistent result. In addition, when PPD is used the rather rapid loss of potency which conventionally has been thought to be 2 weeks after dilution even under refrigeration means high wastage in private offices. Finally, the fussy, time-consuming technique tends to discourage the physician from using this method.

Cost of the Mantoux test. Ordinarily PPD costs about $1.75 for 10 doses. If this number of tests is used within the 2 weeks of useful life after dilution the cost per test is kept rather low. Disposable syringes with needles attached usually cost about 25 cents each.

The Heaf Test

There are 2 multiple puncture methods, the Heaf test and the Tuberculin Tine test (Rosenthal). The Sterneedle® test is the currently available modification of the Heaf test.

The tuberculin employed in the Heaf test is a special concentrated PPD, prepared according to the method of Connaught, and needs to be refrigerated when stored.

This test employs a disposable cartridge with 6 sharp points which is fitted on the end of a so-called gun. A drop of liquid concentrated PPD is placed on the acetone-cleansed skin by means of a sterile toothpick, spread to cover an area three-eighths of an inch in diameter, and the cartridge end of the gun is placed on the tuberculin. Pressure on the handle of the gun triggers the needles which pass through the tuberculin and 1 mm. into the skin. This carries an unknown but probably uniform amount of the tuberculin into the skin. The needles retract automatically. The cartridge may then be disposed of, or it can be washed and sterilized for use again. The technique for washing these cartridges for re-use does not actually remove all of the tuberculin. Therefore, if such cartridges are to be used in any other program, a real hazard may exist. This residual tuberculin does not matter if they are reserved strictly for tuberculin testing.

The skin reaction may be assessed at 3 to 7 days. The criteria for reading are:

Negative reaction, if no raised induration is felt by passing the finger lightly over the punctures. In a negative reaction, the puncture spots usually disappear on gently stretching the skin. Pale, indurated points are associated with failure to react to the Mantoux test with the use of 5 T. U. and are called negative.

Positive reaction: 1 plus (+) is discrete palpable induration with erythema at 4 or more of the puncture sites; 2 plus (++) is coalescence of induration to form a ring; 3 plus (+++) is more extensive, like a coin; and 4 plus (++++) is even more severe, with possible slough.

There is only a single concentration of tuberculin used in this method.

Consistency of the Heaf test. This test differs from the Mantoux in that there should be uniformity of the depth to which the needles go in all cases. However, skin thickness varies, as does the individual vary from the group. There is no way to be certain that the amount of tuberculin carried into and deposited in the skin is uniform. However, the published results indicate that, when compared with itself on repeated testing, the consistency is quite good.[5]

Sensitivity of the Heaf test. Comparison studies reveal that there is a fairly high degree of agreement between the Mantoux and Heaf tests.[5]

Specificity of the Heaf test. Very little work has been done with the Heaf test or any tuberculin test other than the Mantoux to show the degree of specificity. It is the impression of those in my area who have used this test that the specificity of the Heaf test is less than the Mantoux.

Simplicity of the Heaf test. This is a method which is much simpler than the Mantoux. It is faster in that the fussy method has been replaced by a simple, nonskilled method. However, there is a working piece of apparatus. Such a gun can break down, and this means either having a spare one or stopping testing until the gun can be repaired.

Cost of the Heaf test. The cost of the Sterneedle test kit is $43.20. However, if 250 or more tests are performed each year the cost is very low.

The Tuberculin Tine Test (Rosenthal)

The other multiple puncture method is the Tuberculin Tine test (Rosenthal). The tuberculin employed is a 4-times concentrated Old Tuberculin. The Tine test is an entirely self-contained disposable unit and is a small plastic rod with 4 prongs, each of which is 2 mm. long. There are 2 layers of dried, 4-times concentrated O.T. on the tips of these prongs or tines. The technique is to cleanse the forearm with alcohol or acetone, but have it dry. The arm is so grasped that the skin is tight and the individual cannot jerk away from the test. The Tine test is removed from the plastic well in which it comes, and is then pressed firmly on the volar surface of the forearm, withdrawn and discarded. The test is read at 2 or 3 days. The least positive area of induration measures at least 2 mm. around at least one of the puncture points. This 2 mm. induration corresponds to a Mantoux test with 5 T. U. which measures 6 mm.

Consistency of the Tine test. Comparison of the Tine test with itself, performed by Badger et al,[6] showed that it disagreed about 10 per cent of the time. This was practically the same as its disagreement with the Mantoux test, and in this study the Mantoux disagreed with itself about 6 per cent.

Sensitivity of the Tine test. Furthermore, when employed on 100 patients with tuberculosis proven to be due to *Mycobacterium tuberculosis* in 3 separate trials, comparing the Mantoux to the Tine, and in which the Mantoux test results were 100 per cent positive, there was 1 trial in which there was no failure of agreement; 1 trial with 2 per cent Tine failures; and 1 trial with 3 per cent failure of the Tine tests to agree with the Mantoux. This indicated that in the case of proven disease there was practically no disagreement. However, as soon as one includes patients who have not been proven bacteriologically and in the general public, the failure to agree goes to 10 per cent. It seems fair to state that the sensitivity of the Tine test is good.

Specificity of the Tuberculin Tine test. As with the Heaf test, the specificity of the Tine test is probably less than that of the Mantoux. However, very little work has been reported in which specificity can actually be assessed.

Simplicity of the Tine test. This is the simplest of all of the tuberculin tests, being even simpler than the Vollmer patch test. It is the only test in which it is just as easy for the testing team to go to the person to perform the test as it is for the individual to come to the team. Since the test requires no liquid tuberculin, no refrigeration, and can be kept on the top of the desk, it is instantly available for the physician to use.

The reading of the Tine test is somewhat difficult when the reaction is small because a mm. ruler must be used, and because many individuals do not readily distinguish precisely between 2 whole mm. and fractions thereof.

Cost of the Tine test. The cost of the Tine test, when purchased in single packages of 25 tests, is $12.00. However, when this test is purchased in larger amounts the cost per test is reduced.

The Vollmer Patch Test

The Vollmer patch test is a method which no longer is recommended, but since some of my associates still insist upon using it in babies I feel that I should detail its technique. In this method the interscapular area of the back is preferred, but the volar surface of the forearm may be used. The skin must be thoroughly cleansed with acetone so that all oil and grease are removed. The patch is then applied as with any other adhesive bandage. It is left in place for 2 days, during which time it must not become wet (either by perspiration or any other source of moisture). It is then removed, and 2 days later the reaction is assessed. The reading is based upon comparison of the areas which were in contact with the 2 rectangular pledgets which had been impregnated with concentrated O.T. with the control area which had been in contact with the middle pledget which had been impregnated with all the solution materials but which was devoid of tuberculoprotein. The test is positive when there is definite induration with tiny vesicles around the margins of the induration and no induration at the control site. Since the results of this test do not match adequately those of the other tests this test no longer is recommended.

These are the methods available to us for the testing of our patients for the presence or absence of reactivity to tuberculin. I would urge that in every case we record as negative only those individuals whose skin gives no induration. I feel strongly that all reactions should be accurately measured and recorded as such. The decision can then be made (without affecting the record) that measurements below some arbitrary point are doubtful and those from that point and larger are positive.

Physicians in their private offices have an obligation to tuberculin-test every patient they see who has an illness which we know tends to allow a tuberculous infection to escape from the controls imposed by the body's defenses. Such conditions are hormonal problems, especially diabetes mellitus and hypothyroidism; silicosis; malignant lesions under chemotherapy; blood dyscrasias, especially lymphoma; pulmonary diseases; and, finally, those patients who have been subjected to subtotal gastrectomy or who are going to be treated with corticosteroid preparations.

In conclusion, I can do no better than to reemphasize the current statement from the National Tuberculosis Association which is based upon quotations from its committee on tuberculin-testing. It is called "Tuberculin-Testing Today—a guide for physicians in their offices."

"Accuracy of dose and placement coupled with ease of administration and low cost are the principal characteristics desired in a tuberculin skin test. Along with these basic requirements one would also like the materials to be stable over long periods of time without the necessity of special handling.

"The importance of using a standard dose, or at least a known dose, of tuberculin is emphasized. Such a dose makes possible an estimate of the degree of sensitivity. There is mounting evidence of a direct relation between a high degree of tuberculin sensitivity and the probability that active disease exists or will develop in the subject and his close contacts.

"*The Mantoux test.* Most of the research on skin sensitivity to the various products of tubercle bacilli and other mycobacteria has been done with the Mantoux type of test as the basic technique. For the purpose of dose control its position is unique among the methods commonly used for skin-testing. However, if those methods now under development are included, there are several other ways of introducing antigens into the skin.

"As an occasional or routine office or clinic procedure the Mantoux test has serious disadvantages. These are: 1. Skill in administering the test is required. 2. Patients (and many physicians) object to the use of syringes and needles visibly injecting material into the skin. 3. It is necessary to use freshly made dilutions of PPD, the wastefulness of single tests on 1 dilution is unavoidable, and the sterilization of needles and syringes is required. 4. There is some difference of medical opinion about the possibility of transmission of hepatitis virus by the multiple-dose syringe and platinum-iridium needles flamed for sterilization. These facts have made the Mantoux test cumbersome and prevented its more general use.

"*Multiple puncture tests.* Multiple-puncture tests overcome most of these obstacles to routine tuberculin-testing of all patients. 1. Minimal skill is required. 2. Patients are less alarmed. 3. Individual tests are conveniently performed with little waste of time or materials. Materials are stable at room temperature. 4. There is no danger of transmitting viruses. Transcutaneous puncture with concentrated tuberculin gives a relatively strong test with few 'false negatives.'

"The disadvantages of the multiple puncture tests now available are: 1. The dose of tuberculin retained in the skin is unknown. 2. Some of the tuberculins used are unstandardized. 3. The concentrated tuberculin used may produce an excess of positive reactions and cross-reactions with other mycobacterial infections. 4. Quantitative measurement of the size of the reaction is difficult because of the multiple injections and the variable dosages. 5. The Heaf or Sterneedle test must also be read as either weakly positive (without erythema) or strongly positive (with erythema).

"Enough comparative studies have been reported to show a good degree of agreement on patients with tuberculosis between the multiple puncture methods and the Mantoux using 5 T.U. of PPD-S. There is a slight margin of more positives to the former, if read as positive when 2 mm. or more of induration is present. The discrepancies formerly observed with the patch test are not seen. However, there is still not sufficient evidence upon which to base any conclusion about possible cross-reactions in certain parts of the U.S.A.

"*Suggested practice.* Doubtful (i.e., 2 to 5 mm. of induration) reactions to the first Mantoux at 3 days should be retested with the same dosage of PPD.[7] It is believed that equivocal reactions to the multiple puncture tests (2 to 10 mm. of induration) without erythema and an 'angry' look at 3 days should also be repeated with 5 T.U. of PPD intradermally. The American Thoracic Society Committee on Diagnostic Skin-testing made the following recommendation: 'For clinical screening use where tuberculosis is not suspected a multiple-puncture test is acceptable. If an equivocal reaction is obtained, a repeat test with the intermediate strength (5 T.U.) (0.0001 mg. of PPD) Mantoux is indicated.'[8]

"When a physician's practice calls for only an occasional tuberculin test, the Tine (Rosenthal) test is recommended because of its convenience, stability, and low initial cost.

"When patients are being tested for clinical screening in greater numbers in the office, the Heaf or Sterneedle test is useful because the original cost is soon repaid by use, and for its stability and convenience.

"Syringes, needles, and dried PPD tablets should be available to retest by Mantoux all patients whose response to the multiple puncture tests is equivocal.

"The ATS Committee also recommended: 'For differential diagnosis where tuberculosis is suspected, the multiple-puncture test is acceptable as an initial test. If a negative or equivocal reaction is obtained, a repeat Mantoux should be given with intermediate strength PPD. If still negative, a stronger dose should be used to rule out tuberculous infection.

" 'Regardless of the type of test used the sizes of all reactions should be recorded in quantitative terms' (millimeters of induration)."

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The Follow-up of the Positive Reactors*

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The follow-up of the positive tuberculin reactors represents the most important single part of any tuberculosis control plan of the future. Since of necessity tuberculosis control of the future depends upon the tuberculin test, it is obvious that unless the reactors are followed up the tuberculin-testing per se is useless. This means not only follow-up of the old positive reactors and the new converters to find the source of infection in a family or neighborhood environment, but also a continuing surveillance of positive reactors already known. As the program has been functioning in Missouri with the American School Health Association's school certification program[1] based on the tuberculin test the part of the physician has been largely that of assisting with the program and testing the contacts of the positive reactor children in his office prior to X-ray examination. The basic tuberculosis control program of the future is going to require the tuberculin-testing of as many of the total population as possible. Obviously, we must fall back upon the private physician, and he must be prepared not only to test but to follow up the positive reactors.

The physician must be primarily concerned with the identification of those persons who are infected with tuberculosis and be able to locate the source of infection and positive reactors who will become future sources of infection. Only in this way can we eradicate tuberculosis. By eradication we mean reducing the incidence of tuberculosis infection to the lowest possible level and using all methods to maintain this low level forever. It is time that we stopped "kidding" ourselves and our patients about the status of a positive tuberculin. The public must be taught that it means the individual is infected with tuberculosis. It means the presence of live tubercle bacilli. Although the tubercle bacillus may remain dormant for years or throughout life, it may at any time break out from its nest in the tubercle to again multiply its progeny and cause clinically active disease.

To accomplish this goal the physician must have the coöperation of an active public health department to assist with the program, in harmony and in tune with the proper use of the tuberculin test, giving all possible assistance to the follow-up program. The American School Health Association's certification program furnishes the school and community with an adequately organized and purposeful screening program. It gives the community valuable community-wide education and experience in tuberculin-testing and follow-up, always resulting in the community being awakened into a new awareness of tuberculosis as well as general health problems. A continuing certification program can and will lead, as it is now in Missouri, to testing of the people in communities, factories, nursing homes, and other special high risk segments of the population.

The interesting fact which needs to be brought to the attention of many private physicians is the low prevalence of positive reactors in the middle United States. Tests of large numbers of children and adults in some 22 counties in Kansas have yielded an overall infection rate of only 1.3 per cent. The infection rate for some 33 counties in Missouri was 1.9 per cent among grade and high school children. The rates among adults in Kansas are 14.5 per cent and 23.0 per cent in Missouri.

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These were personnel in contact with school children. In the suburbs of Philadelphia similar rates were reported and it would be expected that similar rates would be found in suburban Washington, D. C. The point of importance to the physician is that among his average patients the prevalence of reactors is going to be quite low, particularly if he is a general practitioner seeing both children and adults.

Upon tabulating the results from the Newton County, Missouri skin-testing survey of over 6,500 children and school employees, only 336 positive reactors were found.[2] Since some of these fell into family groups, it was discovered that there were only 255 different families to be included in the follow-up of positive reactors. These factors decrease the amount of endeavor required to follow up the positive reactors.

The Newton County program was well controlled with a good follow-up of the school reactors' households, and 12 new cases of tuberculosis were found for each 1,000 positive reactors studied. This compares favorably with the yield of contact work among newly reported active cases. Nineteen persons per 1,000 contacts studied were found to have active tuberculosis previously unknown to health authorities.[3] In Missouri the program has been in operation for a little more than 3 years. As new counties are certified and negative reactors are retested every 2 years in the counties originally certified, the program will become more productive. This value will increase proportionately as it spreads to the entire population of the counties. An active up-to-date tuberculin register, with personnel adequately trained in its use, will furnish the proper data and information to physicians and health authorities for complete follow-up. Many programs of tuberculin-testing are not productive because there is inadequate follow-up. The American School Health Association with its recommended program and fixed goals can assist in maintaining an orderly productive program.

Further epidemiologic information may be derived from a school certification program, as shown in Newton County. In this county of 29,000 population more than 6,500 persons were tested. The infection rate of the positive reactors among the school children was 3.38 per cent and among adults 30 per cent. The positive reactor rates in schools gives us a picture of local school tuberculosis problems and the adequacy of control measures at this time. Attention is immediately drawn to 2 schools with over 12 per cent positive reactors, 2 schools with over 8 per cent, and 3 schools with over 6 per cent. Fifteen schools had no positive reactors, indicating no tuberculosis problem at this time. There were 26 other schools with minimal to moderate tuberculosis problems, as indicated by their infection rates, extending from over 1 per cent to over 5 per cent.

The study of the geographic locations of the schools shows that the 7 schools having a reactor rate of 6 per cent and higher were all rural schools in contrast to the usual conception that there are higher infection rates in urban areas. The county seat, Neosho, which has a population of more than 10,000, was among the lowest found. All the schools with rates of 6 per cent and over were grouped in 2 circles having a radius of 5 miles each. This pinpoints for physicians and public health authorities the areas of greatest need. These areas center on the old lead and zinc mines, and the children have had their tuberculosis infection handed down from old cases of silicotuberculosis in the area. This tends to show that tuberculosis today is often primarily a family or neighborhood type of epidemic.

The second item of importance is the family aggregation of reactors. As everyone knows, there is a great tendency for tuberculin reactors to aggregate into families, and this fact decreases the problem of follow-up by the private physician. One can assume certain generalizations in dealing with this problem. For instance, if one's practice were in an average middle-class clientele, the adults would be less than 25 per cent positive, and the children 2 per cent or less. However, the aggregation into families would mean that probably the physician would not be concerned with more than 1 to 5 per cent of the total families in his practice in whom tuberculin reactions of any significance would be found. The physician should take this into consideration in considering the degree to which he might be willing to commit himself to the follow-up of reactors.

In addition to the low prevalence of reactors and their family aggregation the size of the tuberculin reaction is the third point of importance which should be considered by the physician in the follow-up of the positive reactor. It has been amply demonstrated by reports in many parts of the world that the larger the reaction the greater the probability is of developing active tuberculosis, as these individuals are followed. In England the breakdown rate among persons with tuberculin reactions of over 15 mm. of induration was about 3 times greater than among people with reactions smaller than 15 mm. Different studies in the United States have indicated that the percentage of breakdown is 2 to 5 times greater among persons with large reactions than among those with small reactions.

In Muskogee County, Georgia the results of the 5 T.U. tests delineated a high risk group, namely, students with 10 mm. or more of induration.[4] These reactors comprised only 7 per cent of the study population, but furnished 80 per cent of the new active cases during the first 5 years of observation. It is therefore important not only that the physician perform tests on as great a proportion of his patients as possible but that he measure and record the reactions for his future use. The size of reaction has also been demonstrated to be of importance in locating tuberculosis among the contacts of small children. In kindergarten and first grade children in Kansas City 30 times as much new active tuberculosis was found among the contacts of children with very large reactions compared to that found among the contacts of children with small reactions. This was shown by the work of Wood and Furcolow[5] in the Kansas City schools.

The fourth problem of importance in follow-up is the liability to breakdown among those who are reactors. As everyone knows, the liability to breakdown among positive reactors varies according to age. Among the very young infected children there is a great danger of developing serious tuberculosis. From the age of 5 until puberty this danger appears minimal. After puberty to approximately 35 years of age a great number of breakdowns occur among the older adolescents, and particularly among young adults. After the age of 35 female breakdowns tend to occur at a rather low rate. Breakdowns among male positive reactors increase with age. When one combines the different rates of breakdowns of the different ages with the increased significance of the larger tuberculin reactions the physician is able to outline for himself a program of follow-up of high-risk tuberculin reactors in his practice without dedicating too much of his time or creating excessive expenditures on the part of his patients. With the emphasis now being placed on treatment we do not minimize the value of aggressive prophylaxis therapy. When physicians are hard pressed for time and health departments are in difficulty finding sufficient funds for many needs, we believe that aggressive yet intelligent prophylaxis therapy should be focused on these high-risk tuberculin reactors.

Lastly, in areas where the health department works closely with the physicians the large part of the follow-up of the positive reactors can be carried on by the health department with the results being cleared by the physicians. This is widely practiced throughout the United States. The health department and other private agencies are encouraged to perform as much tuberculin-testing as is possible and to carry on as complete a follow-up of positive reactors as possible. This allows the physician to assume control of a case when there appears to be some chest lesion or other reason for medical consultation. It is presumed that these agencies would make available to the physician the records regarding the size of the tuberculin reaction performed on this patient. To many of us it appears that closer collaboration of the physicians with the health departments in local areas will result in considerable alleviation of the burden of the follow-up on the physicians and on the patients, especially since many of the high-risk groups appear to be of low-income status and less able to afford the periodic X-ray examinations and other requirements for follow-up.

A properly conducted school certification program will find the tuberculosis which is present among the school children, the personnel, and the contacts. Extended to include entire geographic areas it will find cases, but of primary importance it will make known the positive reactors, the future reservoir of active disease. With hard work and a continuing program coupled with the use of an active tuberculin register the physician and health department can pinpoint and keep track of the high-risk tuberculin reactors. This will enable them to give priority where needed in follow-up and prophylaxis therapy.

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Drug Therapy for Tuberculous Patients Outside the Hospital*

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Basic Principles

THE PRESENT-DAY TREATMENT OF TUBERCULOSIS relies principally on antituberculosis drugs. These may be divided into 2 groups: (1) the standard, or first-line group which consists of isoniazid, streptomycin and para-aminosalicylic acid (PAS), and (2) the second-line group which includes such drugs as ethionamide, cycloserine, pyrazinamide, and viomycin. The standard drugs in various combinations are always used in initial treatment. The second-line drugs are employed when the standard drugs have failed or for some reason cannot be administered. Of the presently available drugs, isoniazid is by far the most important and should constitute the basic component of any chemotherapeutic regimen for tuberculosis.

Effective drug therapy in tuberculosis has radically altered some of the fundamental principles of treatment prevalent in the pre-chemotherapeutic era. Because successful drug treatment must be maintained for several years, the longest period of responsibility for proper management has shifted from the inpatient to the outpatient services. Bed rest, once the mainstay of antituberculosis treatment, now plays a relatively unimportant role. Reversible collapse therapy (pneumothorax and pneumoperitoneum) is rarely used these days. Surgical treatment has become less important, being reserved almost entirely for the resection of persistently infectious cavities in persons who are reasonably good operative risks. Elaborate rehabilitation services are not usually necessary in the aftercare of the successfully treated patients.

Obviously, the availability of effective chemotherapy makes it possible to treat most patients outside of the hospital once their disease becomes noninfectious. It is still advisable, however, to initiate antituberculosis drug therapy in a hospital for most patients who have active and previously untreated pulmonary tuberculosis in order to (1) carry out a thorough clinical investigation, (2) select the most suitable drug regimen based on clinical, roentgenographic and laboratory findings and observe the initial response to this regimen, (3) determine the presence or absence of drug intolerance or hypersensitivity (usually apparent within the first 4 to 8 weeks of treatment), (4) permit isolation during the early, infectious period of the disease, (5) initiate a program of health education and indoctrination in matters pertaining to treatment and prevention of the spread of tuberculosis, and (6) start plans for rehabilitation.

After the first 2 or 3 months of hospitalization continued institutionalization requires individual evaluation, consideration being given to such factors as temperament, intelligence and coöperativeness of patient, home and family conditions, type and response of disease, other medical problems, and availability of suitable outpatient services. Most successfully treated patients can be permitted to return to their usual work or activity within a year or less after the start of chemotherapy.

The prognosis for continuous good health without relapse in properly managed, coöperative patients remains excellent in spite of a full work schedule. The prognosis is not nearly so good and the need for rehabilitation services is greater in "problem" patients such as chronic alcoholics, elderly people, those with residual cavitary disease, uncoöperative, ignorant or indifferent persons, homeless men, and those with other serious, complicating diseases.

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In special situations such as those which obtained in the recent studies conducted by the Tuberculosis Chemotherapy Center in Madras[1] or which may obtain among certain private patients it is feasible to initiate and complete the entire course of treatment outside the hospital. Success requires carrying out the same type of program in the home as was already described for hospitalized patients. Such an undertaking throws a heavy responsibility on the supervising physician or clinic team and is not inexpensive.

First-line Antituberculosis Drugs

Isoniazid. This is unquestionably the most effective of all the antituberculosis drugs. It is highly diffusible and is rapidly distributed to all organs. The toxicity is low. Probably the most frequently encountered toxic effects are those affecting the peripheral and central nervous systems, the most common of which is peripheral neuritis, which rarely occurs during the administration of the usual dose of 5 mg. per Kg. of body weight per day, but occurs in perhaps 10 per cent or more of adults who receive 8 to 10 mg. per Kg. per day. Peripheral neuritis is not usually evident until after the first 3 or 4 weeks of therapy. The peripheral neuritis is due to an antimetabolic action of isoniazid against pyridoxine (vitamin B_6). Consequently, the administration of pyridoxine protects against the development of this toxic neuritis and is specific for its treatment when it occurs. Pyridoxine should be given concurrently with isoniazid if the dosage of the latter exceeds 5 to 8 mg. per Kg. in the adult for longer than the first 3 weeks of treatment, if the patient has a vitamin deficiency, or if at any time during treatment early manifestations of neuritis are observed. In such circumstances 10 mg. of pyridoxine per 100 mg. of isoniazid should be given. Higher doses of pyridoxine are indicated for full-fledged peripheral neuritis. The central nervous system toxicity of isoniazid is much less common and is probably not related to pyridoxine metabolism. Major effects include convulsive and psychotic episodes, readily reversible on withdrawing the drug. Minor disturbances, which do not necessarily require discontinuation of the drug, consist of slight difficulties of mood and of mentation.

Hypersensitivity reactions and hepatic toxicity are uncommon; in some instances such reactions appear to be triggered by concurrently administered PAS.

Isoniazid should be administered orally in a total daily dose that usually need not exceed 5 to 8 mg. per Kg. for adults. For children, who tolerate the drug better, a daily dose of 5 to 15 mg. per Kg. is permissible. The total daily amount may be divided into 2 or 3 doses or given as a single dose without appreciably affecting the effectiveness of the medication, although the chance of developing neurotoxicity is increased by using a single daily dose. In the treatment of outpatients it is useful to check the regularity of self-administration. This is best done by employing some form of surprise urine examination for the presence of isoniazid or its metabolites. The Kasik test is suitable for this purpose.[2]

Streptomycin. This is an effective antituberculosis drug, being surpassed only by isoniazid. It must be administered parenterally. The drug penetrates the tissue barriers of the central nervous system poorly but diffuses into most other organs in therapeutic concentrations. Streptomycin has a dose-related toxic effect on the eighth cranial nerve. In the presence of normal renal function conventional doses of streptomycin usually cause no serious renal or important auditory damage. However, doses in excess of 20 mg. per Kg. (approximately 1.0 Gm.) daily will cause loss of vestibular function in most persons within a period of 3 to 4 weeks. In clinical practice it is reasonably safe to give adults and adolescent children 1.0 Gm. of streptomycin daily for 6 to 12 months without adjusting the dose according to body weight. The possibility of serious loss of vestibular function must always be kept in mind, however, particularly for patients over 50 years of age who cannot compensate as well as younger patients if their vestibular function is destroyed. Whenever there is a complaint of vertigo by any patient, regardless of age, the drug should be withheld immediately and not resumed, since complete loss of vestibular function resulting from streptomycin is irreversible. Only 1 or 2 days of continued administration after the first appearance of symptoms may result in such irreversible damage. Auditory damage resulting from streptomycin is also irreversible and must be carefully guarded against. Streptomycin is also mildly nephrotoxic and is, therefore, best omitted or given at reduced dosages individually adjusted in the face of impaired renal function. Minor toxic effects of streptomycin include moderate eosinophilia, skin eruptions, mild transient paresthesias, and drug fever. Some of these reactions may disappear during continued administration of streptomycin, and some are not bothersome enough to warrant interruption of treatment with this drug.

Para-aminosalicylic Acid (*PAS*). This drug has relatively little antituberculosis activity when given alone. Its only importance is as a companion drug to isoniazid or streptomycin, enhancing appreciably the efficacy of these more potent agents. The toxicity of PAS is of 2 types, (1) that causing gastrointestinal disturbances and (2) that provoking hypersensitivity reactions. The more serious toxic effects are those of the hypersensitivity type and may involve the skin, liver, hematopoietic system, and less frequently the brain. They frequently begin abruptly with high fever or insidiously with low-grade fever. Such reactions most often occur between the second and seventh weeks of therapy. Failure to recognize PAS hypersensitivity, and consequently to discontinue administration of the drug, may result in the development of a serious and potentially fatal illness. PAS hypersensitivity apparently can act as a trigger mechanism to set off a hypersensitivity to companion drugs.

PAS is customarily given orally as the sodium salt in dosages of 9 to 12 Gm. daily for adults, usually in 3 or 4 divided doses after meals or with supplemental nourishment. Recent studies suggest that administering a single dose of 6.0 Gm. daily may be just as efficacious and much better tolerated than the larger, divided dosage. PAS is available in various forms, and sometimes one may be better tolerated than another. These include the free acid, the sodium, potassium or calcium salt, PAS combined with ascorbic acid (PAS-C), and PAS adsorbed on an anionic exchange resin (Rezipas®). The PAS products are usually dispensed in tablets of 0.5 Gm. but are also available in powder or granule form. The best method of administering PAS must be worked out for each patient. When administered to outpatients regularity of self-medication should be checked by performing urine tests for the detection of PAS (e.g., Phenistix®*).

Second-line Group of Drugs

The second-line group of antituberculosis drugs have certain common characteristics:

1. They are highly toxic at optimal therapeutic levels.
2. They are of a relatively low order of potency as compared with isoniazid or even streptomycin.
3. Patient-strains of tubercle bacilli rapidly develop resistance to them, both in vitro and in vivo, if sputum "conversion" does not occur during the early months of therapy.
4. They do not demonstrate any cross-resistance with the first-line drugs, or, with rare exception, among themselves.

Originally these drugs were used only inside the hospital. At present an increasing number of patients whose disease has proved to be resistant to the standard drugs are being discharged from hospitals after having been successfully treated with 1 or more second-line drugs. Such patients usually require the continuation of their successful drug regimen for 6 to 12 months or longer outside the hospital. Thus, although the initiation of second-line drug regimens is best carried out in a hospital, the maintenance of such regimens is the legitimate concern of all physicians who supervise tuberculous patients outside the hospital. A very brief review of some of the more important of the second-line drugs is therefore in order.

Ethionamide. This is probably the most useful of the secondary drugs. The desirable adult dose, given orally, is 1.0 Gm. daily, but most patients cannot tolerate more than 500 to 750 mg. because of nausea and vomiting produced by higher doses. Recent studies suggest that in such circumstances the drug may be successfully given in a single dose together with a sedative at bedtime. Serum glutamic oxalacetic transaminase (SGO-T) determinations at monthly intervals should be done to detect the earliest evidence of liver toxicity, which may occur at any time during administration. Prompt discontinuation of the drug usually results in the reversal of such abnormal findings, if they should occur.

Cycloserine. This is an orally administered drug with a low order of antituberculosis effectiveness in vitro but with considerably more effectiveness in vivo. Although it is therapeutically desirable to give 1.0 Gm. or more daily, the incidence of major neurotoxicity at this dose level is appreciable. The usual daily dose given is between 500 and 750 mg. in 2 divided doses 12 hours apart. Minor neurotoxic symptoms may occur even with this dosage, usually within the first month of treatment.

Pyrazinamide. This is an extremely effective orally administered drug. It makes an excellent companion drug to isoniazid or streptomycin for previously untreated patients or to any of the other second-line drugs for patients with disease resistant to isoniazid or streptomycin. Its usefulness is limited by its ability to cause hepatic toxicity at any time during its administration. Serum glutamic oxalacetic transaminase (SGO-T) levels should be determined at least every 2 weeks throughout the period of administration and the drug discontinued promptly if the level rises. The preferred dose is 30 to 40 mg. per Kg. per day (average total dose of 2.0 Gm.), best given in 2 equally divided doses.

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* Available, with instructions, from Ames Company, Inc., Elkhart, Indiana.

Viomycin. This is a parenterally administered drug which is considerably inferior to streptomycin in its antituberculous activity but which has similar toxic effects. In spite of the similarity to streptomycin, it may be effective in a streptomycin-resistant infection. According to the most recent investigations the recommended dose is the same as streptomycin, namely 1.0 Gm. daily by a single intramuscular injection.

Other second-line drugs are considered too toxic for use outside the hospital or are still in the stage of clinical investigation.

Desensitization

Hypersensitivity reactions occur in approximately 5 per cent of patients receiving streptomycin and slightly under 10 per cent of those receiving PAS. The reported incidence of hypersensitivity reactions to isoniazid varies from 0.1 to 0.6 per cent. Occasionally multiple drug hypersensitivities are encountered, almost always with PAS as one of the offending agents. The diagnosis is best established by discontinuing all medication, waiting for the symptoms and clinical findings to subside (usually within 2 days), and then demonstrating the return of the symptoms and findings within 1 to 4 hours after the administration of a challenge dose of the drug under suspicion. Challenge doses of drugs must be used with caution, paying particular attention to any elevation of the serum glutamic oxalacetic transaminase (SGO-T), a finding which calls for prompt cessation of administration of the offending agent. If the hypersensitivity reaction is mild, continued cautious administration of the offending drug may be successful. If evidence of hepatitis or exfoliative dermatitis should be present, it is best to discontinue the drug. In most instances of drug hypersensitivity, however, allergenic drugs may be continued, if it is thought necessary, by using some type of desensitization technique. A highly successful rapid method of desensitization employing decreasing doses of cortisone or prednisone concurrently with increasing doses of the offending agent has recently been reported by Simpson.[3]

Drug Resistance

The emergence of drug-resistant strains of tubercle bacilli undoubtedly is a limiting factor in the chemotherapy of tuberculosis, but the laboratory demonstration of drug resistance is not always a very practical or even reliable guide to treatment. This is partly because accurate demonstration of the degree of drug susceptibility requires time-consuming, meticulous techniques not readily available in ordinary laboratories. More importantly, the correlations between the laboratory findings and clinical evidence of impaired therapeutic efficacy are not as consistent as might be expected. This is particularly true of the demonstration of in vitro resistance to isoniazid. Clinical experience tends to support the currently held belief that in vitro isoniazid resistance in patient-strains of *M. tuberculosis* does not necessarily indicate the complete loss of drug effectiveness for that patient and in no way should be interpreted as calling for the discontinuation of isoniazid. This does not imply that mere continuance of the same isoniazid-containing regimen under these circumstances is sufficient. On the contrary, in the face of laboratory evidence of a high degree of isoniazid resistance other measures to strengthen the treatment program are called for. This should include replacement of companion drugs, or simply the addition of others, together with the performance of indicated surgical procedures. Primary isoniazid-resistance in this country at present occurs in no more than 1 to 2 per cent of newly discovered and untreated cases of active pulmonary tuberculosis, and there is no clear-cut evidence that the incidence has shown an alarming increase in the United States during the past 10 years. Thus, in this country, at any rate, it is fairly safe to assume currently that patients who present themselves with previously untreated tuberculosis harbor tubercle bacilli which are highly susceptible to isoniazid. This favorable situation may very well change during the next 1 or 2 decades.

As opposed to isoniazid, therapeutic efficacy of streptomycin is doubtful when susceptibility tests indicate significant levels of in vitro resistance. The emergence of strains resistant to streptomycin is considerably delayed by concomitant administration of another effective drug. If the combination of drugs fails to eliminate tubercle bacilli from the sputum, the subsequent emergence of strains resistant to both streptomycin and its companion drug or drugs is to be expected. This development requires discontinuation of streptomycin and the formulation of a new treatment program. As was the case with isoniazid, primary streptomycin resistance also occurs in from 1 to 2 per cent of patients with newly discovered active tuberculosis, and the incidence does not seem to be increasing.

Patients who have never received PAS or any of the second-line drugs may be assumed to harbor tubercle bacilli fully susceptible to the drugs in question in vitro. Clinical guidelines are probably all that are necessary during the initial phase of the administration of second-line drugs. If possible, the initial therapeutic trial of any new regimen which includes minor drugs should be carried out for at least 6 months if tolerated by the patient before it is abandoned as unsuccessful. On the other hand, there is rarely any justification to continue the administration of these minor, toxic drugs for longer than 8 to 12 months if the sputum remains positive for tubercle bacilli. From evidence at hand it seems probable that the development of in vitro resistance to these minor drugs coincides with neutralization of drug effectiveness. Thus, it is likely that the significance of in vitro resistance to PAS and the second-line drugs approximates that of streptomycin rather than isoniazid.

Although drug susceptibility tests are not considered of vital importance in the management of patients with active pulmonary tuberculosis, when available from a reliable laboratory they can offer useful information which, however, should remain supplemental to the clinical guidelines recommended.

Drug Regimens for Active Pulmonary Tuberculosis

Initial Drug Therapy in Adult Type

Isoniazid and daily streptomycin. This is the most effective of all regimens. It is the preferred regimen for cavitary and acute pneumonic forms of pulmonary tuberculosis for patients under 50 years of age. This combination may also be advisable for extensive cavitary or pneumonic forms of the disease in older patients, but in such circumstances it must be used with extreme caution.

Isoniazid and PAS. This is the most frequently employed regimen. It is almost as effective as isoniazid and daily streptomycin for all but the most advanced forms of the disease. This combination is the preferred one for almost all forms of advanced cavitary pulmonary tuberculosis in patients 50 years of age or over and for minimal or moderately advanced pulmonary tuberculosis without obvious cavitation and tuberculous pleurisy with effusion, irrespective of age of patient.

Isoniazid alone. Isoniazid without a companion drug is highly effective in noncavitary pulmonary tuberculosis and pleural effusion. In patients with this type of disease, however, it is desirable to add another drug if tubercle bacilli are isolated from the sputum, gastric contents, or pleural fluid.

Isoniazid, daily streptomycin and PAS. This regimen is considered by many authorities[4] to be the best initial combination for all stages of active pulmonary tuberculosis because of the possibility that the disease may be due to a strain of *M. tuberculosis* resistant to one of the standard drugs. If drug susceptibility tests indicate that the strain present is entirely susceptible to all 3 drugs, either streptomycin or PAS is discontinued and a 2-drug combination used. Numerous studies[5] have thus far failed to demonstrate the advantage of "triple drug therapy" over isoniazid and daily streptomycin. For ordinary purposes the additional risk of toxicity of the 3-drug regimen is not justified. This regimen may be advisable for patients who have a greater than average chance of harboring drug-resistant tubercle bacilli; such patients would include "Skid Row" clients, patients whose histories are not reliable, those recently in contact with known "drug-resistant" cases, or residents of geographic areas (Africa, India, South America) known to have a high incidence of "primary drug-resistant" disease.

Alternating courses of daily streptomycin-pyrazinamide with isoniazid-PAS. Recent studies have indicated a high degree of effectiveness and a low degree of toxicity with this regimen. Patients are started on daily streptomycin and pyrazinamide and after 4 weeks shifted to isoniazid and PAS. Courses are alternated every 4 weeks throughout the first 8 to 12 months of treatment.

Isoniazid and a second-line drug. Under special circumstances, when neither streptomycin nor PAS can be used, anyone of the "minor" drugs may be employed as a companion drug to isoniazid. A modest therapeutic superiority over isoniazid alone may thus be achieved but at the cost of a considerably higher risk of drug toxicity.

Duration of Treatment

It is advisable to maintain the original drug regimen responsible for attaining sputum "conversion" for a period of 6 to 12 months after the first negative report of monthly cultures. For patients receiving daily streptomycin it is permissible to lower the dosage after "sputum conversion" has occurred to 1.0 Gm. 3 times weekly for the subsequent 6 to 12 months, or sooner for patients over 50 years of age. But no matter when streptomycin or PAS are dropped from the combined regimen, it is essential that the isoniazid be continued without interruption for at least 2 years after tubercle bacilli have disappeared from the sputum and up to 5 or more years for patients who have had very extensive disease initially. If cavitation persists in association with persistently negative sputum or gastric cultures for 6 months or longer, an "open-negative" or quiescent status may be said to have been reached. Under such circumstances isoniazid should be given for at least 5 years or perhaps indefinitely. Relapse rates during the first 2 years following reversal of infectiousness are approximately 1 per cent for patients without residual cavitation and about 5 per cent in patients with the "open-negative syndrome," provided the recommended treatment is scrupulously carried out.[4]

Unless there are contraindications all patients with cavities persisting for as long as 6 to 8 months should be considered for appropriate surgical measures if tubercle bacilli have not disappeared from the sputum by that time.

Re-treatment

Re-treatment problems are of 2 varieties:

1. Those in patients who come under treatment as a result of reactivation of disease previously brought to an inactive state with an apparently successful course of chemotherapy (patients with reactivated disease). This category includes an appreciable percentage of patients who will be excreting tubercle bacilli still susceptible to all 3 major drugs. The same principles of treatment given for previously untreated patients apply to this group as well. However, because the chance of encountering tubercle bacilli resistant to streptomycin, PAS, or isoniazid is much greater than in original treatment cases, the cautious use of a triple-drug regimen (daily streptomycin, isoniazid and PAS) is more justifiable. Clinical guidelines are still most important for this type of case, but careful attention should be paid to the results of drug-susceptibility tests. Once it is established that the patient's disease is unresponsive to the major drugs, the drug regimen should be changed in accordance with principles to be outlined for the next category of patients.

2. Those in patients who have persistently active pulmonary tuberculosis unresponsive to adequate trials of standard antituberculosis drugs (patients with "drug-resistant" disease). This category of patients usually results from lack of coöperation of the patient or failure of the supervising physician to carry out a well-planned standard drug regimen. The occasional patient whose original treatment fails even though satisfactory by present-day standards also falls into this category. This group of patients is most difficult to treat not only because of the presence of "drug-resistant" disease but also because of the type of persons that compose it, including older persons unsuitable for surgical procedures, uncoöperative patients, allergic individuals, chronic alcoholics, and those with other serious medical diseases. Most of these patients have extensive, chronic cavitary disease which was able to withstand the antimicrobial effect of the most potent antituberculosis drugs. It is surprising that any of these patients can be helped. For the management of this type of patient the following schema is recommended:

a. Hospitalization is necessary for the close supervision and very elaborate laboratory investigations needed to monitor the treatment.

b. Isoniazid should be continued at the conventional dosage even though the patient-strain of tubercle bacilli is highly resistant to the drug in vitro.

c. Streptomycin should not be given if, as is usually the case, the patient-strain of tubercle bacilli is resistant to the drug in vitro.

d. PAS may be employed if tolerated in a patient whose organisms are fully susceptible in vitro.

e. Second-line drugs should be used in multiple-drug regimens employing at least 2 and occasionally 3 such drugs to which the patient has never been exposed before, or to which the patient-strains are fully susceptible in vitro.

f. Early surgical intervention for persistent cavitation should be carried out whenever possible so as to take full advantage of the secondary-drug regimen before bacterial resistance develops.

g. Bed rest should be tried and pneumoperitoneum or perhaps artificial pneumothorax should also be considered as adjuncts to the new drug regimen.

h. If, in spite of all efforts, the patient's disease remains active and infectious, he should be maintained on isoniazid indefinitely because of its apparent suppressive effect. If the disease is stabilized and the patient is coöperative and understanding, he may be supervised outside the hospital.

The overall rate of success in reversing the infectiousness of patients whose disease has failed to respond to standard drugs is probably between 5 and 15 per cent, mainly due to the inability of many of the patients to continue the second-line drug regimens because of intolerance or toxicity. Of those who can remain on the drug regimen for 8 to 12 months reversal of infectiousness may occur in approximately 50 to 60 per cent; relapse rates among those successfully treated are relatively high. It is, therefore, evident that there is bound to accumulate a number of "re-treatment" patients whose disease will remain infectious in spite of all therapeutic measures. And yet, with prompt and well-conducted original therapy the problem of re-treatment need rarely be encountered. The solution is clearly preventive, with emphasis particularly on early diagnosis and properly planned initial treatment. It is in this phase of the re-treatment problem that private practitioners can make a most important contribution.

Drug Regimens for Hematogenous and Extrapulmonary Forms of Tuberculosis

The early diagnosis of acute miliary tuberculosis or tuberculous meningitis is essential to achieve optimal results of treatment. In spite of modern chemotherapy the overall mortality rate of these forms of disease in New York City remains approximately 50 per cent because the diagnosis is so frequently missed and chemotherapy either unduly delayed or not administered at all. It is in the recognition of these insidious forms of tuberculosis that the general practitioner can be most helpful. The basic principles of drug treatment are essentially the same as those outlined for the initial treatment of pulmonary tuberculosis, with minor modifications. The latter include the use of higher doses of isoniazid during the first month or two of treatment and proper employment of adrenocorticosteroids. Since the treatment of miliary or meningeal tuberculosis should be carried out in a hospital, this is not the place to discuss it in detail.

As was the case with pulmonary tuberculosis, the introduction of effective chemotherapy has also resulted in radical changes in the management of localized extrapulmonary forms of the disease involving such organs as bones and joints, kidneys, pericardium, and lymph nodes. Surgical intervention, the principal modality of treatment in the past, has given way to medical management, with chief reliance on combinations of isoniazid, streptomycin and PAS, following essentially the same principles as those already given for pulmonary tuberculosis.

Drug Regimens for Childhood Tuberculosis

Uncomplicated primary tuberculosis in children may be effectively treated with isoniazid alone (5 to 10 mg. per Kg.). Treatment should be maintained for at least 2 years after roentgenographic stabilization of the disease. Most children may be treated outside the hospital. During the early phase of treatment apparent worsening of the disease may occasionally be observed roentgenographically, usually due to lymph-node enlargement. This development does not call for a change in drug regimen; continuation of isoniazid will almost always bring about the eventual resolution of the disease. Cavitary and other complicated forms of pulmonary tuberculosis in children are treated in the same way as in adults.

Chemoprophylaxis

Isoniazid has a unique combination of properties that makes it a highly suitable agent for preventive treatment, being specifically effective against *M. tuberculosis*, inexpensive, relatively nontoxic even with long-term usage, and readily absorbed and diffused after oral administration. It may therefore be employed prophylactically under a variety of conditions. However, a decision to undertake preventive drug treatment should not be made in a casual manner. Careful observation for drug toxicity, serial chest roentgenography as indicated, and the usual precautions to assure regularity of self-administration must be carried out. For purposes of prophylaxis isoniazid alone in conventional amounts (5 to 10 mg. per Kg.) given in 1 or 2 doses is sufficient, and this regimen should be maintained for 1 to 2 years, or even longer depending on each situation.

Time does not allow a complete discussion of the indications for antituberculosis chemoprophylaxis, even though this is a phase of treatment which is administered outside the hospital and should be of great interest to all forward-thinking practicing physicians. I will therefore list, without comment, situations which may call for the prophylactic use of isoniazid:

1. Recent tuberculous infection without clinical evidence of disease:

a. Persons with recent unequivocal conversion of their cutaneous reaction to tuberculin, irrespective of age.

b. Children 3 years of age or under with a strongly positive tuberculin skin reaction (at least 10 mm. induration to intermediate strength tuberculin PPD).

c. Adolescents or young adults whose tuberculin skin reaction is very large (15 mm. or more induration to intermediate strength PPD or its equivalent).

d. Infants heavily exposed to tubercle bacilli who may be in the pre-allergic phase of infection (i.e., infected but not yet demonstrating skin reactivity to tuberculin).

2. Nonactive pulmonary tuberculosis under special conditions:

a. Pulmonary disease detected on routine chest roentgenograms, considered as probably due to tuberculosis, and of undetermined activity.

b. Pulmonary tuberculosis, recently active, and presently inactive as a result of inadequate drug therapy in the past.

c. Inactive pulmonary tuberculosis in persons who may be in situations which put them at high risk of reactivating their disease, e.g., pregnancy, diabetes, administration of adrenocorticosteroid hormones, severe and prolonged acute lower respiratory infections, postgastrectomy state, malnutrition, chronic alcoholism, silicosis, sarcoidosis, and malignant disease of the hematopoietic and reticulo-endothial systems.

3. Long-term administration of adrenocorticosteroid hormones in all individuals.

4. Primary, or true, prophylaxis in selected uninfected persons at high risk of becoming infected. Alternate methods of supervision could be serial tuberculin-testing at 3-month intervals, with chemotherapy started if the reaction to tuberculin becomes positive, or BCG vaccination, which is my preference.

Pulmonary Disease Caused by Unclassified Mycobacteria

For the sake of completeness attention should be called to the increasing number of reports of patients suffering from pulmonary disease or cervical lymphadenitis which, clinically and pathologically, resembles tuberculosis and yet may be due to varieties of Mycobacteria which are quite distinct from *M. tuberculosis hominis* or *bovis*. These forms of disease should be suspected whenever previously untreated pulmonary tuberculosis or presumed tuberculous lymphadenitis in a child appears to be clinically resistant to an ordinarily effective combination of antituberculosis drugs, or the strains of Mycobacteria isolated from an untreated patient are found to be strongly resistant in vitro to streptomycin and isoniazid. This disease is difficult to treat, responding poorly, if at all, to both first-line and second-line antituberculosis drugs. If possible, early surgical intervention should be resorted to.

In conclusion, I should like to appeal to all internists and general practitioners to seriously consider tuberculosis as an illness treatable by the generalist in medicine. It requires no more knowledge, skill and judgment than the treatment of peptic ulcer, diabetes, or cardiovascular disease, but, most emphatically, it does not require less.

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Special Problems of Tuberculous Patients and the Private Physician*

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CONSIDERING all of the excellent discussion that has gone before in this Symposium on the Private Physician and Tuberculosis, there remains little for me to talk about as the final speaker. Your Program Committee, nevertheless, must have had in mind in assigning me this subject that there would be some loose ends which might be designated as special problems.

You have already heard the essential responsibilities of the private physician in such areas as case-finding, tuberculin-testing and follow-up of positive (and in special circumstances of negative) reactors, of diagnosis and of treatment outside the hospital. What then are the special problems beyond these with which the private physician can be most helpful?

Perhaps we can look at the matter somewhat historically. In the past the family physician played a larger role in the diagnosis of tuberculosis than he did in its therapeutic management, which was in largest part a matter of long-term institutional care (in hospital or sanatorium), in which case the family physician of necessity could not actively participate. Advances in therapy during the past 2 decades, and particularly in the last decade, have sharply curtailed the need for such long-term institutional care for the majority of tuberculous patients. The family physician, therefore, can and should take a larger part in the treatment and in all phases of the clinical management of these patients than he could do in the past.

Hospitalization may still be advisable, and it is so probably for most cases in the initial phase of treatment, but it need not necessarily be prolonged nor be continued until the disease has become inactive as formerly was almost always essential. Neither must the hospitalization any longer be always in special hospitals or even in special services of general hospitals. Here is one special problem in which the private physician can be helpful, namely, by persuading the governing bodies of general hospitals that they too have a responsibility to the tuberculous patient. Hospital regulations, still existing in many voluntary general hospitals, which prohibit the admission of tuberculous patients have become obsolete and are completely anachronistic. In this connection it may be pointed out that in many municipal hospital systems, and in such Federal hospital systems as the Veterans Administration, tuberculosis care has become largely the responsibility of the general hospitals within the systems. In the Veterans Administration, for instance, special tuberculosis hospitals have declined in number during the past 10 years from 21 to 3, whereas the case-load of tuberculous patients has declined only by about a half to two-thirds. Tuberculous patients, particularly those who are treated for the first time, and in whom the prognosis with well-planned medical management is almost invariably good, can be suitably cared for in any general hospital. The necessary precautions for the protection of other patients and of hospital personnel can be arranged in single rooms or in special units of several beds for group isolation.

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These protective precautions need not be elaborate, and they depend for their effectiveness more on education of the patient, and also staff education, than they do on isolation procedures per se. Mask and gown procedures, which may be essential for other infections such as the staphylococcal, are indeed neither necessary nor desirable, at least for such tuberculous patients as may be able and willing to coöperate in simple measures of protection. Most patients who are not markedly debilitated or prostrated or who are not coughing up blood do not (even if somewhat febrile) require strict bed rest in the hospital. They may, even from the beginning, be semiambulatory and on partial self-care. Hospitalization is desirable mainly for completeness of diagnostic evaluation, for protection of members of the patient's household until the risk of communicability is reduced, for education of the patient not only in measures to protect others but in all aspects of his care which will require his active coöperation, and for observation of his initial response to, and toleration of the medications which are needed. If the patient is admitted as a private patient, the supervision of all of these aspects of hospital care are most appropriately the responsibility of his regular family or private physician, with such consultation with a tuberculosis expert as may be needed regarding the selection of the optimal drug regimen and other special problems. If the patient is admitted not as a private patient, but as a service patient under the care of the hospital staff, the referring private physician should be fully informed and, when time and circumstances permit, should indeed participate in mapping out the long-term management program.

Often, when home conditions are suitable, the patient may be returned to the home and to the family physician's care within a matter of weeks, to continue on the treatment regimen which has become established. This will require, of course, a very considerable familiarity on the part of the private physician with the disease, with its complications, with the drugs used in the treatment, and with the complications of the treatment, particularly with the toxic drug reactions which may be encountered. Such familiarity with problems of tuberculosis care is not usually as easily acquired by general practitioners and internists as their familiarity with the problems of many other diseases which are encountered more frequently and with which they became more familiar in their early training. Many medical school curricula and intern training programs were in the past greatly deficient in providing opportunities for observing and for managing tuberculosis, even when this was a much more prevalent disease than it has now become. In more recent years there has been a trend to correct this deficiency, but partly through the historical delegation of tuberculosis care to special institutions, which to a considerable extent still prevails, and partly through the reduced prevalence of the disease many physicians still lack opportunities to become as familiar with tuberculosis as they do with most other common diseases.

It is a mistake to think that the advent of specific and highly effective drug therapy has made this an easy disease to treat. In many respects the treatment is more complex than it was at an earlier time. It is not, however, more complex or difficult than most serious illnesses which the generalist is called upon to take under his care. It is still almost uniquely one, however, in which the combination of chronicity and of long-term communicability necessitates an unusual degree of coöperation among the physician, the public health authority, the surgeon, the hospital administrator (including the director of outpatient services), and the paramedical services of nursing and medical social work. The family physician is the key figure in such a coöperative effort. If he can have available specially qualified medical and surgical consultants, either privately or through clinic consultation services, to review the individual patient's progress periodically, he can do exactly what is done in the best special tuberculosis services by the attending ward physician, namely, to coördinate a group effort with emphasis on deliberate and systematic periodic consideration of each patient's progress, always with a view to reinforcing therapy or changing it completely as indications arise.

This is indeed a somewhat different responsibility than the family physician takes in regard to most of his other patients. Consultation, of course, he is used to. Most often, however, it is consultation with one other colleague such as a surgeon or other specialist, and usually one consultation suffices to determine the entire course of clinical management of the case. Or, if this does not suffice, further consultations may be called at irregular or infrequent intervals. In the case of tuberculosis, in contrast, there usually is need for periodic and relatively frequent reëvaluation of each patient's progress. Although surgery is less frequently necessary as an adjunct to medical treatment than it was 10 years ago, it is often enough indicated so that a surgeon should participate in the reëvaluation, except perhaps in instances in which the patient is making rapid and consistently favorable progress. The public health officer needs to be informed, at least by periodic reports, of the patient's communicability status and of the proper periodic examinations of the household contacts. The public health nurse's participation will be required and will be most helpful on a continuing basis, as will that of the medical social worker, to help work out family problems and plans for the patient's rehabilitation. But at the center is the patient's own regular physician to guide and implement the entire program.

In being thus helpful the family physician must make a considerable sacrifice of his time in maintaining communications in the coördinated program. The care of tuberculous patients has always required teamwork, with the family physician as an important member of the team. What the revolution in tuberculosis treatment has made inevitable is the need for his participation to be more continuous and his responsibility greater; but it is most important that the concept of a coöperative medical program be maintained and that the special services provided by most communities in one form or another be fully utilized. There is no place for casual decisions in the care of any tuberculous patient, nor can the treatment be routinized to a simple formula applicable to all cases.

The principles of drug therapy, as Dr. Chaves has pointed out, are the same whether for inpatient or outpatient treatment, or, to put the matter in its truer perspective, during the in-hospital or during the out-of-hospital phases of treatment. It should be emphasized, moreover, that the out-of-hospital phase is not by any means always a matter only of continuation of therapy begun in a hospital. If for any reason hospitalization cannot be effected immediately the diagnosis is made, the treatment should usually not be delayed on that account. The earlier specific therapy is begun, particularly in the more acute forms, the better the prognosis and the less irreversible anatomic damage will ensue. Here, then, is another special problem in which the private physician may be most helpful—to see to it that treatment is started promptly, whether or not the patient can be promptly hospitalized. In the less advanced cases, indeed, and particularly in those which are early, progress may be so rapid that the need for hospitalization may become less compelling even while the arrangements are being made. This leads to the consideration, also, whether in cases of minimal extent it may not be more advantageous to plan for conducting the entire treatment program on a domiciliary basis, omitting hospitalization entirely. No general rule can be formulated in this regard, since the diagnosis often is only presumptive and since many of the patients falling in this category are ones in which alternative diagnoses need most carefully to be excluded. Such exclusion may, of course, require surgical exploration and resection of the lesion.

I do not propose to review here the entire subject of the treatment of tuberculosis. This would be repetitious of much that has already been discussed here today and it would, in any case, go beyond the limits of my subject and require more time than is available. I think it is apparent that for the private physician to be most helpful to tuberculous patients it is necessary for him to have a very thorough understanding of tuberculosis therapy in all of its phases. This includes a knowledge of the uses and of the untoward side-effects not only of the so-called primary drugs, i.e., isoniazid, streptomycin and PAS, which are used in original treatment, but also much about the potentialities and characteristics of the secondary drugs which may be useful in re-treatment.

The patients who failed to attain lasting cure of tuberculosis in an original course of treatment form an increasingly large proportion of those for whom special institutional facilities are still needed. In many the possibility of ever attaining a truly inactive status of the disease may be remote, and in most the requirement for long-term institutional care is as great or greater than it was for the average tuberculous patient with advanced disease in the era before antimicrobial therapy. Nevertheless, these patients do not all need indeterminate institutional care of what used to be called the custodial type. Many may be returned to their homes once maximum benefit, or what appears to be maximum benefit, has been reached by inpatient treatment. Most will need to continue with specific drug therapy in one form or another indefinitely in order to maintain a relatively inactive status. Many, either because of functional impairment resulting directly from the disease or because of disabling associated conditions, may be unable to leave the home to make visits to the physician's office or to a clinic. These patients are thus truly in need of home care in the fullest sense of the word. They may go along for years with little or no progression of the tuberculosis but may be quite incapable of living a normal active life, or anything even approaching this. Here is another special problem which falls squarely in the lap of the private physician or of a highly organized home-care program of official or voluntary agencies in the few communities where such programs exist.

Finally, there is the problem not alone of the follow-up of family and other contacts, as was always the case, but of treating many of these by chemoprophylaxis. The chemoprophylaxis of tuberculosis is, of course, a relatively new form of prevention of tuberculosis morbidity. The term chemoprophylaxis, in relation to tuberculosis, is applied to 2 distinct situations. In the first and truest sense it is the administration of isoniazid to the uninfected individual. This may be called primary or infection prophylaxis. Much experimental work indicates that under certain conditions of exposure to infection, and with certain dosage of isoniazid, primary chemoprophylaxis of tuberculosis may indeed be achieved. As yet, its practical clinical utility in the prevention of tuberculous infection in humans is limited. In the second sense of treating infected tuberculin-positive individuals, free of any other clinical manifestations, the established indications are much broader. This secondary or infection chemoprophylaxis is indicated in all infants who are reactors and in other age groups when a tuberculin conversion is known or may be presumed to be recent. It is, of course, inaccurate to call this treatment prophylactic, since, manifestly, it is treatment of an established infection.

From the standpoint of the physician it makes little difference whether chemotherapy is called prophylactic or curative. The very fact that medication is administered on an individual basis, rather than on some mass basis, requires that the person receiving the medication be classed as a patient. A tuberculin reactor receiving isoniazid is in the truest sense a tuberculous patient. In this instance he receives therapy on an ambulatory basis throughout, his usual activities need not be modified, and his treatment is an essential concern of his personal physician, whether or not it was he who initiated the matter. Any patient receiving any drug for a period as long as a year needs close medical observation with special regard to differentiating any intercurrent illness which may develop from a toxic drug reaction. Since in this circumstance treatment is always, or should be always, with isoniazid alone, such toxic drug reactions will be infrequent; but they can and do occur. Here then is another special problem which becomes principally the concern of the private or family physician.

In the foregoing I have by no means exhausted the subject or referred to all of the special problems in tuberculosis care which are the concern of the private physician. I have merely set forth some special examples. In summary and conclusion, I think it is apparent that it is not so much a question of the role of the private physician in contradistinction to any other kind of physician; rather it is a question in what way the personal or family physician, if the patient has one, may be helpful to the tuberculous patient. The answer, in my opinion, is that there is no phase of a tuberculous patient's care in which his own regular physician cannot be helpful. Whatever attention the patient receives from other physicians or agencies is, in a fundamental sense, ancillary to that he receives from his own regular physician, be he private or a member of an organized comprehensive medical service of which the patient is a subscriber or beneficiary.

Tuberculosis Today and Tomorrow*†

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I APPROACHED THIS ASSIGNED TOPIC, "Tuberculosis Today and Tomorrow," with some anxiety, not that I cannot be fairly secure about the Tuberculosis Today part, but forecasting the future is always chancy, and I have a natural reluctance to have my guesses come home to haunt me. I intend, therefore, to discuss with you in the Tuberculosis Tomorrow part one approach to tuberculosis control through which the eradication of tuberculosis seems reasonable.

Tuberculosis in the United States is not just what it is reported to be. What is reported is that there are about 10,000 deaths annually and that there are some 50,000 new active cases a year and that about 90 per cent of these new active cases occur in half of the 50 states, with 30 per cent in 22 larger cities. Provisionally, for Washington, D. C., to bring it home, there were reported 607 new active cases and 92 tuberculosis deaths in 1962. This makes Washington, D. C. about ninth in the ranking of the larger cities by number of cases and deaths.

Over half of all newly reported cases in the United States are in white men, about 5 per cent are in young children under 5 years of age, and about one-sixth are in young people under 25. Most important is the fact that two-thirds of new active cases are in people in the working years of 25 to 64 years of age, and only one-fifth of active pulmonary cases are reported as minimal; the rest are reported as moderately and far-advanced.

These, then, are the figures that are usually reported. What is not reported is the following:

There were some 330,000 cases on tuberculosis registers in 1960. These represent people who need some kind of service. One hundred and twenty thousand of these were active cases. This is more than twice the number of newly-reported cases. These people need intensive care or close supervision. This indicates the chronicity of tuberculosis and also the important fact that therapy is not always successful.

Fifty-eight thousand of these people were in hospitals. Again, this is more than the number of newly-reported cases; but remember that not all patients go to the hospital, or, having gone to the hospital, they do not stay. However, in the 58,000 there are some who have been there a long time, such as the 8 per cent that have been in the hospital more than 3 years and 18 per cent between 1 and 3 years.

Sixty-two thousand patients with active disease were not hospitalized. Of these, some had been in the hospital, some had not; all, however, needed frequent expert attention—drugs, X-rays, laboratory examinations, etc. They needed to see a physician periodically and to have help from nurses and all of the services to remind them that they were still under medical care.

That left about 210,000 other cases on registers other than active. Some of these with activity undetermined needed repeated diagnostic service. About 50,000 were inactive but still under drug therapy; others were inactive, not under therapy, but still needing periodic checkups.

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† Material for this paper was drawn, in part, from a presentation by Dr. Edward T. Blomquist, Chief, Tuberculosis Program, Communicable Disease Center, Public Health Service, Department of Health, Education, and Welfare, Atlanta, Georgia. Dr. Blomquist's presentation was given at a meeting of Tuberculosis Control Officers and Sanatorium Directors in Denver, Colorado, May 12, 1963, and will be printed in its entirety in an early issue of *Public Health Reports*.

Altogether then, there are 330,000 people needing some kind of service. This is approximately half of the population of Washington. Therefore, the 50,000 new cases reported is not all of the tuberculosis in the United States.

Five years ago it would have seemed unlikely that eradication of tuberculosis would be a subject for discussion in 1963. In 1958 there was acknowledgment that for a few of the most favored areas of the nation, where incidence even then was very low, eradication was a reasonable goal. In most of the country it appeared to be impossible, even as a remote goal. Today the situation has changed. Death rates continue their steady decline, but case rates have been leveling off.

Between 1961 and 1962 it now appears that the national case rates stood still for the first time. This should not be a depressing development. It is, instead, we feel, a good sign because it is the result of a better situation, not a worse one. Two very important things are affecting the case rate.

First, in the past year there has been a great improvement in the examination of contacts, the most fruitful of all case-finding activities. As these cases are found and treated, future cases will be prevented.

Second, the new reporting recommendations allow far more liberal and accurate counting of active primary cases, but they also disallow counting cases in which activity is undetermined. Therefore, the figures being compiled now represent more precisely the significant cases of active disease that are occurring, and this will be even more true as the recommendations come into wider use.

The leveling case rate also reflects a real change of mood in tuberculosis control, a change that is resulting in action which will permit faster movement ahead. A very strong feeling is shared by all of the tuberculosis program staff of the Public Health Service that there is renewed determination, energy and spark in tuberculosis control work these days. Staff members of the TB Program and in particular those in program services have been spending most of their time during the past year out in the field working with state and local health departments. They come back beaming with admiration for the spirited work being done.

This same kind of enthusiasm was present at tuberculosis symposia for physicians which were held under the auspices of state health departments in the various regions of the country during the last year. However, enthusiasm alone will not eradicate tuberculosis, but it is necessary to success and is one reason for the thinking that the job can be done.

In case this is construed as overoptimism, we must realize that this does not mean tuberculosis will be gotten rid of very soon. The peculiarity of the disease is such that even if all new infections were stopped right now there would still be potential cases for the future among the large number of persons who already have been infected.

A couple of years ago an estimate was made of the number of people who were already infected in 1960 and how long they could be expected to live. In the year 2000 about 8 million of the people who were already infected in 1960 will still be living, plus those infected more recently. Eradication of tuberculosis is going to take time, and it will take longer in some areas of the country than in others.

Apart from the renewed enthusiasm in tuberculosis control, hopefulness about reaching eradication in the future is founded upon the enormous effectiveness of present-day drug therapy. This effectiveness does not need detailed documentation, but studies have shown that more than 95 per cent of all patients with active disease who receive appropriate drug therapy from the time of diagnosis can recover. This striking success is not happening all over—only about 80 to 85 per cent of new active cases of tuberculosis are being inactivated, but it can be bettered.

Another index of hope is the increasing evidence that the proportion of young people infected is rather low. In the Navy only 5 per cent of recruits react. School children in 10 areas of California have an average rate of only about 3 per cent reactors.

Possibly one of the greatest indices of optimism is the increased knowledge about the risk of developing tuberculosis and of the means to do something about it. The probability today of becoming infected with tuberculosis, developing active disease, and dying from it is relatively small when compared to the situation of only a decade or two ago. Furthermore, recent epidemiologic studies have made possible more precise definition of risk.

It is estimated that about 35 million people now living in the United States have been infected with tubercle bacilli, but the rate of new infection now occurring is believed to be rather low.

In Puerto Rico and in Muscogee County, Ga., and Russell County, Ala., trials by the Public

Health Service indicated that the risk of developing tuberculosis is much greater for persons who are tuberculin reactors than for those who are non-reactors.

Of the total numbers of cases that appeared during the follow-up, 75 per cent were among those identified as reactors at the start of the investigation.

In Denmark 76 per cent of all new cases during the 3½- to 4-year follow-up in the Danish Tuberculosis Index studies occurred among persons who were tuberculin reactors at the start. These findings indicate the advantage of either entirely avoiding becoming infected or delaying that event as long as possible.

The Danish Tuberculosis Index also provides data on the potential risk of developing active disease among those with specific X-ray findings. It shows that a reactor with suspicious shadows on the X-ray film has a 40 times greater chance of developing tuberculosis than an individual with normal lungs on X-ray examination. In a study of tuberculin-positive children, the Public Health Service found that their risk of developing extrapulmonary complications, such as meningitis and miliary tuberculosis, during the first year after entry into the study increased with the extent of roentgenographic involvement detected at the initial diagnosis and decreased with the age of the child. The risk was greatest for very young children and particularly so for infants.

Again, in Public Health Service chemoprophylaxis trials in which a total of 25,512 contacts were examined soon after the diagnosis of an index case of tuberculosis, 479 contacts or 19 per 1,000 contacts were found to have active tuberculosis. Contrast that with the rate of about 30 per 100,000 for the country as a whole.

Risk of reactivation and the relapsing tendency of pulmonary tuberculosis is well known. This is more so in individuals who have never been treated with chemotherapy, ranging from about 15 per cent to a high of 30 per cent in those who had advanced lesions and depending upon such factors as age, race, and length of observation of the group studied. The special risk of reactors who have diabetes or silicosis or who are on long-term steroid therapy or who have had gastrectomies is also well known.

What all the information on growing risks says in terms of tuberculosis control program planning is that if it is knowingly used, efforts can be tailored to achieve the most telling effect in the long run. In working toward that occasion, systems will have to be set up to provide examinations at intervals over long periods of time for persons known to be at special risk. If this is done carefully, if only what can be done well is undertaken, and if what is to be attempted is selected on sound bases the prospect of eradication appears quite reasonable.

Prophylactic treatment or very early treatment has been found to be remarkably effective in preventing tuberculosis among persons at special risk. In large-scale trials conducted by the Public Health Service isoniazid taken daily for a year prevented most of the serious extrapulmonary complications of primary tuberculosis in young children and greatly reduced the incidence of tuberculosis among household contacts, newly diagnosed active cases, and patients in mental hospitals during the year that the drug was taken.

Tuberculosis Tomorrow, then, will reflect this newer knowledge in the form of tuberculosis control and eradication programs with different emphases than what are current now.

First, and this first everywhere, the excellent drug therapy that is available must be used so that at least 95 per cent of the patients with active disease excreting drug-susceptible organisms do recover. This is basic, and no matter what else is done no tuberculosis control or eradication program can succeed unless the treatment is done well. Doing it well in a hospital or clinic or private practice is a great deal more than just passing out pills; it is treating sick human beings and using all of the science and art of medicine to heal them. This is step number one, and it cannot be skipped.

Case-finding will no longer be trying to reach everybody with a 1-time and every-so-often screening but will be identifying those people at special risk and then keeping track of them, examining them, and treating some of them over long periods of time.

It has been proposed that most communities will find it more practical, as a start at least, to identify those people at special risk who, if they did develop tuberculosis, would present a greater risk to others, namely, children.

The proposal, therefore, has been to concentrate immediate efforts on those people at personal risk who could infect children. Eradication will have been achieved when a whole generation of children has grown up and lived out a lifetime without becoming infected. This means selecting for long-term service people at risk from among those who have sufficiently close association with children to present the potential danger of infect-

SOME OF THE SPEAKERS AND COMMITTEE MEMBERS seated at the head table during the Luncheon Session of the Symposium on the Private Physician and Tuberculosis, June 6, at the Hotel Statler-Hilton are (left to right): Dr. C. E. Brasher, Dr. Samuel Diener, Dr. Carl Muschenheim, Dr. James E. Fitzgerald, Dr. J. Arthur Myers, and Dr. J. Winthrop Peabody, Sr., who presided at the luncheon program. Dr. Fitzgerald was Chairman of the Planning Committee and Drs. Diener and Peabody served on his committee along with Drs. Moe Weiss and Roy G. Klepser.

This issue of the MEDICAL ANNALS contains the addresses of the speakers who participated in the Symposium.

ing them—parents, grandparents, big sisters, and cousins, if they baby-sit. Neither should relatives be neglected if they are around the children very much, or the people next door if they sometimes keep the youngsters, but also teachers, school bus drivers, people who work in day-care centers, playgrounds at camps, and baby-sitters or domestic workers who mind the youngsters.

This proposal does not constitute a once-in-a-while tuberculin-testing or X-ray campaign for these people. It means a careful selection from among those who are at special risk of tuberculosis and continued examinations at intervals sufficiently short so that if disease should develop it would be diagnosed very early. It means that chemoprophylaxis should be practiced among those for whom it is shown to be appropriate—contacts, the inactive tuberculous, recent converters, reactors with uncontrolled diabetes, reactors on chronic steroid therapy, reactors with X-ray findings, and infant and young child reactors.

What does tuberculosis look like tomorrow then? It looks like doing more things meticulously for more people. It looks like doing these things more often and for longer periods of time. The old custom of screening for cases and dismissing as negative everyone who does not have active disease is no longer adequate.

In the continuing long-term job that is ahead, if the concept of eradication is to be taken seriously the community will have to provide a lot of help to its professionals. Volunteers could not only help provide the persuasion that will be needed to motivate returns for reëxamination but supplement staffs in clinics to allow professional people to give professional service. Enlisting this kind of help will be an important part of the job in the ultimate eradication of tuberculosis.

PRESIDENT'S PAGE

THINK ABOUT THIS

One of the most telling arguments against the Social Security financing of old-age medical assistance lies in the fact that it would place an unfair proportion of the load on the young worker. It has also been pointed out that some Blue Shield Plans might create the same injustice by straining to cover low-income families and the aging.

The low administrative cost of Blue Plans cannot be bettered. Rising starkly in the midst of all the turmoil about Blue rates is the ever-increasing use and cost of medical care, and this is the principal force driving these rates upward. No amount of clamor by intemperate critics who suggest changes can alter this. The Blues must, however, remain competitive with commercial insurance carriers which carry no public-service load of the low-income and aging.

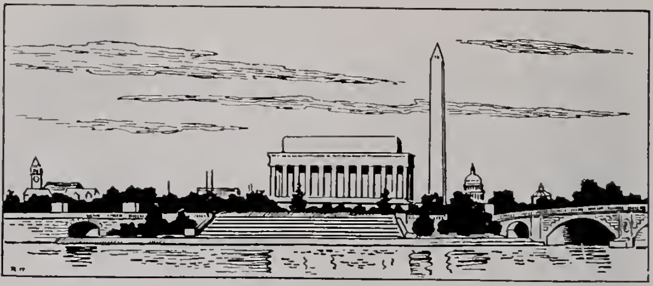
Blue rates to the younger, healthier, better-off subscribers are largely determined by those offered to this low-risk group by the commercial insurers. The bind becomes immediately obvious. If Blue rates appreciably exceed commercial premiums they lose ability to help those who need it.

It is beyond the scope of this discussion to determine whose fault it is that the low-income people cannot truly pay the full cost of their care; it is no fault of the elderly that they sometimes need more medical care than premiums which they cannot afford would finance. The Blues cannot defy the laws of competition and subsidize these groups beyond a certain point.

This impasse has led responsible persons to advance the idea of government subsidy from general Federal tax funds. Labor union leaders (somewhat unaccountably) and spokesmen for the elderly (because they evidently do not care whence come the funds) have pushed for the Social Security approach. This seems to be a sadly deluded concept. Medical care under Social Security as now outlined is grossly inadequate compared to Blue contract benefits. When expanded, as it inevitably would be, to equal what the Blues offer in the Washington, D. C. area, for instance, the cost would become much greater than that of the Blues. Also, remember the Public Welfare mess we have recently seen uncovered. Compare this with the record of Medical Service and Group Hospitalization performance over roughly the same period.

This I believe: The most humane and economical method of caring for those who need help is by Federal subsidy for purchase of Blue Shield and Blue Cross contracts for them. Eligibility would be on the basis of need for care, not some attained age. The talents and resources of the Blue Plans and the commercial carriers could be enlisted. The tab for payment for this would be more equably distributed than under the payroll tax and would unquestionably be far less than the multi-billion dollar program which the Social Security program promises to be.

R C Corley



EDITORIALS

Our A. Louise Eckburg

Twenty-five Years of Service

Below are comments of a few of Louise Eckburg's many friends. They have all known her well for 25 years.

From THEODORE WIPRUD, *Past Executive Director and Secretary of the Society and Managing Editor of the ANNALS*

Superior ability, sincerity, and complete loyalty are qualities that characterize Miss A. Louise Eckburg, Assistant Editor of the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, who will have been employed by the Medical Society of the District of Columbia for 25 years on October 1, 1963.

Little did I realize when she came to the Medical Society's office for an interview that she and I would be associated for nearly a quarter of a century. Now that the years of close association have passed I feel that I am in a better position to evaluate her fine qualities than most of those who know her.

She came to the Society with an unusually fine educational background and experience. She received her B.A. *cum laude* at the University of Minnesota in 1931. For 4 years before coming to the Society she was employed by the American Association of University Women in Washington, D. C.

Important as these qualifications were from the standpoint of the efficient discharge of her duties, the qualities which impressed me most were her steadfastness and her deep interest in the welfare of the Society. There were many difficult situations which we met together, and I am glad to say we survived them unscathed.

Louise richly deserves the gratitude of members of the Society. Personally, I am grateful for the opportunity to express to her my personal appreciation for her valuable service and loyalty during the years of our association.

From WALLACE M. YATER, M.D., *Editor of the ANNALS*

I heartily agree with all that Ted has said about Miss Eckburg's sterling qualities. As Assistant Editor of the ANNALS Louise has been my Girl Friday for 25 years, during which time we have worked closely together. She is extremely painstaking in her work, and I frankly admit that she has on occasion "caught me up" in my editing. She has an imaginative mind and has suggested many innovations. Among other accomplishments Louise is a good editorial writer. I don't know what the ANNALS or I would do without her.

From DONALD STUBBS, M.D., *Past President of the Society*

Ideas are the fruit of individual man's thinking and the measure of his ascendancy in nature. Words are the winged messengers of a man to carry his meaning to all men. The written word forms the bulwark of the bridge of knowledge to span time. For every word in that noble creation of enduring thought there are myriads lost by the wayside. But, even those that are lost play an immediate supporting role and often a remote one rediscovered.

For nearly a full generation Miss A. Louise Eckburg has been the faithful guardian of the words which bind together our profession through the pages of the ANNALS. To modify word arrangement and presentation for a clearer picture, often to adjust the picture itself to improve taste, has been her assigned responsibility. Of greater import has been her self-imposed duty, rigidly enforced, to do the job with loving care and modest anonymity. Those who know her best have appreciated most the success of her mission.

As she moves into the second quarter century of service we join in best wishes to Miss Eckburg for continuation of a job of fulfillment for herself and satisfaction for us.

From Zigmond M. Lebensohn, M.D., *Chairman, Committee on Mental Health, 1953–62*

Hats off to Louise Eckburg for 25 years of skilled and devoted service to the Annals. For 25 years her quiet manner, her sure touch, and her impeccable taste have guided medical writers safely along the path toward proud authorship. Because of her natural reticence and modesty very few readers have realized the important role she has played over the years in making the Annals outstanding for its style, its taste, and its readability.

It has been a rewarding experience for those who have had the privilege of working with her and of benefiting from her many skills. It is an even greater privilege for me to record here our deep and lasting gratitude.

And now, all best wishes on beginning her second 25 years in the service of medicine and good writing.

From Herbert P. Ramsey, M.D., *Past President of the Society*

To be patient with authors about the children of their brains is a great virtue. But when the authors are all medicos, the most individualistic of all persons, the patience demanded is that of a saint. Such patience has been the characteristic of Louise Eckburg over the past 25 years. The foibles, fantasies, and fluctuations of her clients have not disturbed her calm course.

To this virtue are added many others, among which is loyalty—loyalty to her publication and loyalty to her associates. Her demonstrated capacity for getting along with people has stood her, and all of us, in good stead. Her steady bearing, her cheery greeting, her skill and reliability at her assignments, upon which we could always depend, have endeared her to all during this quarter century of devoted and efficient service. As a longtime member of the Editorial Board of the Annals, it is my great pleasure and honor to attest to these things and express the belief that the next 25 years will be even more enjoyable.

A. LOUISE ECKBURG
Assistant Editor, Medical Annals

Eradication of Tuberculosis in the Schools of America

If tuberculosis is to be eradicated our children should be our first consideration. They were born into this world free from tubercle bacilli. In order to keep them free from this infection an eradication program calls for prenatal work by the administration of tuberculin tests to parents, maids, and all others who frequent the home, as well as hospital personnel for those to be born in hospitals. The environment free from tubercle bacilli so created should continue as the child grows older and as long as he remains in the home.

As the child attains kindergarten age and is in contact with more adults it is quite evident that the school environment must be free from contagious cases of tuberculosis.

An all-out tuberculosis project should be initiated and perpetuated in our schools. These children represent approximately 40 per cent of the total population of the nation.

Tuberculin-testing identifies the child harboring tubercle bacilli so that one can intelligently seek the source of infections. It is also the best known way of informing children of the fundamentals of tuberculosis eradication, which information may be useful to them throughout their lives. By actually participating in a program children learn about the hazards of tuberculosis and how to avoid them. Such a program begins in kindergarten and continues through high school.

Tuberculosis can never be eradicated except through a project that starts with birth and that even includes considerable prenatal work. Early infancy is the only span of life which is free from tubercle bacilli. If the tuberculosis project is not begun at this early period of life eradication can never be achieved. When infants and children become invaded with tubercle bacilli eradication is not possible for the remainder of their lifetime.

This tuberculin-testing project not only covers the school child but the school personnel as well.

Eradication of tuberculosis from the schools of America has been the objective of the Committee on Tuberculosis of the American School Health Association for the past 25 years. This Association has repeatedly called attention to a number of facts about tuberculosis in children and has emphasized the importance of a unified program that will bring about eradication of tuberculosis in the schools of America.

Dr. J. Arthur Myers, an eminent authority on the subject, from whom I freely quote, believes that only well-organized tuberculin-testing projects will lead to eradication of tuberculosis.

As a delegate to the House of Delegates of the American Medical Association, representing its Section on Diseases of the Chest, I was asked to introduce the following resolution during its annual meeting in June:

"WHEREAS, Tuberculosis can be eventually eliminated from the United States, if detected early and properly managed; and

"WHEREAS, One-fourth to one-third of all Americans harbor tubercle bacilli in their bodies; and

"WHEREAS, There are many Americans who should now be under medical care for clinical tuberculosis; and

"WHEREAS, Tuberculosis still causes more disability and death among Americans than all other infectious diseases combined; and

"WHEREAS, The nation's school children and adults in frequent contact with them are a primary target of tuberculosis and the best resources for case-finding; and

"WHEREAS, Advances in tuberculin-testing are increasingly facilitating diagnosis and management of the tuberculous patient by the private physician; and

"WHEREAS, The American School Health Association proposes to speed the elimination of tuberculosis by initiating a major annual tuberculin-testing campaign among school children and adults who are in frequent contact with them; *therefore*

"*Be it resolved*, that the American Medical Association does hereby recognize the urgency of this program and urges all of its members and affiliates to support and take part in these important activities on an annual basis."

J. WINTHROP PEABODY, SR., M.D.

The Annual Scientific Assembly Program—Third Day

Long-term success in transplanting a kidney from a cadaver to an unrelated patient suffering from chronic renal disease has recently been reported by a Harvard Medical School team of physicians headed by Dr. John P. Merrill. His understanding of renal physiology and the multiple problems pertaining to isografts, homografts and host abjuration has singled out Dr. Merrill as an innovator and world leader in this fascinating field.

The medical community of Washington, D.C. is indeed fortunate in having Dr. Merrill, a pioneer in the use of the artificial kidney, peritoneal dialysis as well as human-kidney homografts, to lead a group of renowned renologists in a morning symposium presenting the newest developments in the management of renal disease.

When should one use conservatism in the management of renal failure? What is the future for long-term hemodialysis? What are the dangers of immunosuppressive drugs? What is reversible renal failure? All of these questions plus many more will be answered by our distinguished panel consisting of Drs. Merrill, Kevin G. Barry, Alvin E. Parrish, John F. Maher, George E. Schreiner, and Paul D. Doolan.

All physicians will profit by attending the SCIENTIFIC ASSEMBLY morning session on Wednesday, November 20, 1963. (W.D.B.)

When faced with a threat to the health of an infant or child or when faced directly with an ill infant or child, the physician seems impelled often by an emotional rather than a rational motive to "give something." The physician who treats infants and children must, therefore, try to remain as *au courant* as possible in his knowledge of both old and new drugs as they relate to the pathophysiology of disease. Wednesday afternoon's session will try to point up certain warnings about drug use as well as outline some of the newer, hopeful approaches to prevention or treatment of childhood disease. For example, Dr. Sanford Leikin, a children's hematologist, will indicate the extent of anemias which will respond to the use of iron, the invalidity of using other so-called hematinics, and the physiologic principles behind proper use of iron in the treatment of anemia.

Which of us is not using the new "more potent" steroids for any of a number of conditions? Dr. Wellington Hung, children's endocrinologist, will review the indications of potency and possible values of steroid therapy but may also bring out that perhaps the "new more potent" adjectives should be looked at with caution. Dr. Richmond Paine, a children's neurologist, will review the pathophysiology of convulsive disorders, indicating a rational and safe approach to the management of convulsions, and cautioning that certain drugs used fairly commonly for miscellaneous disorders may also induce convulsions. Dr. Sydney Ross, long interested in microbiology and antimicrobiology, will review the current status and limitations in our knowledge of antibacterial treatment. He will try to answer how nearly we have attained the goal of a truly broad spectrum antibiotic.

During the major portion of the afternoon a panel of physicians from Children's Hospital and the National Institutes of Health will examine the need for vaccines directed against respiratory tract illness, the problems in preparing such vaccines, and the current status of availability of such vaccines. They will answer such questions as: What viral antigens should be included in an ideal respiratory tract vaccine for infants and children versus adults? Of what value are the available adenovirus vaccines? (R. H. P.)

Warren D. Brill, M.D.
Robert H. Parrott, M.D.
Members, Program Committee,
Annual Scientific Assembly

Social Activities to Brighten ASA Meeting

The Anual Scientific Assembly is one of the highlights of the year for the medical profession in the District of Columbia area. The Social Activities Committee has been meeting and working the past several months to arrange an interesting and entertaining program to add some gaiety to the 3 days of meetings, November 18, 19 and 20, at the Hotel Statler-Hilton. Drs. Marcel J. Foret and George W. Ware, past Social Committee chairmen, are acting as advisors to this year's committee.

From the opening bell Monday morning there will be a Hospitality Room operated by the Woman's Auxiliary under the chairmanship of its President, Mrs. Jonathan M. Williams. Not only can you go there for a few moments of rest and relaxation but you can also enjoy a cup of coffee and a doughnut, if your waistline permits.

Monday, at noontime, the George Washington University School of Medicine will hold its luncheon. Dr. William H. Cooper has arranged for Congressman James D. Weaver to be the speaker. Congressman Weaver is a Republican from Erie, Pennsylvania, and is one of the 3 physicians who are members of the House of Representatives of the United States Congress. He enjoys an excellent reputation as a very interesting speaker.

Wednesday, at noontime, the Georgetown University School of Medicine will hold its luncheon. Dr. Howard S. Madigan is the chairman for this event. All of us will be glad to welcome back to the group Dr. Hugh H. Hussey, who will be the speaker. Dr. Hussey was formerly Dean of the Georgetown University School of Medicine and is now Director of the Division of Scientific Activities at the American Medical Association headquarters in Chicago, Illinois.

The District of Columbia Medical Society's Annual Luncheon will be held on Tuesday this year. The theme of the program for this day will revolve about "Government and Medicine." It is fitting, therefore, that our speaker, Dr. Edwin P. Jordan, Executive Director of the American Association of Medical Clinics, is one of the best informed on this subject. We will present the John Benjamin Nichols Award and the Certificate for Meritorious Service at this luncheon as has been the custom at previous District of Columbia Medical Society Luncheons. Drs. Alvin Kay and Alex Castro are in charge of these arrangements.

Tuesday night will offer an evening of real pleasure and entertainment for the Doctors' Assistants. An excellent dinner will be preceded by a cocktail party, to be sponsored by Russell, Marsh & Kennedy, Inc. There will be no speeches or instructive talks, but there will be some top-flight entertainment on the gay side following the dinner. This evening's activities are under the direction of Dr. Josephine E. Renshaw and Dr. C. Edwin McNamara with the assistance of Miss Bernadette Aukward, who is President of the District of Columbia Association of Medical Assistants.

The final social activity will be the Cocktail

Dinner Dance of the Society on Wednesday night in the Presidential Ballroom. As in preceding years, Peoples Drug Stores will be host at the cocktail party. Through the generosity of Burton, Parsons and Company top-ranking Devron will provide music for the evening. Table decorations will be furnished by the Woman's Auxiliary. Dr. Frank S. Ashburn and Dr. Charles W. Sprunt are in charge of this evening's activities.

We hope you will all plan ahead and include the social activities as a must in your schedule during the 3 days of the SCIENTIFIC ASSEMBLY, November 18, 19 and 20.

ROBERT S. SMITH, M.D.
Chairman, Social Committee,
Annual Scientific Assembly

Drug Bank Program for Patients with Renal Diseases

FOR MANY YEARS the National Kidney Disease Foundation has provided the services of a Drug Bank Program. The program is designed and approved by the Scientific Advisory Board of the Foundation in an effort to help improve care and treatment of patients afflicted with a chronic disease of the kidney by making vitally needed medication available at the lowest possible cost. At the present time drugs are provided in accordance with the following policies:

1. Patients with a renal disease that has been documented in conformity with the registration form will be provided with medication at a low price.

2. Patients must require medication for at least 3 months.

The Foundation does not recommend or prescribe medication. However, if a physician prescribes one of the drugs available through the Drug Bank Program the patient may receive the medication in the following manner·

a. A registration form is filled in by the physician and mailed by him to the National Kidney Disease Foundation.

b. The patient is given a prescription on the physician's usual blank. (A new prescription is required each time drugs are ordered, but not a new registration form.)

c. The patient is told the price of the drugs by his physician. The patient then sends the prescription and the payment to the National Kidney Disease Foundation. The prescription is turned over by the Foundation to the Drug Bank Pharmacy, and the drugs are mailed directly to the patient by the pharmacy.

The Drug Bank Program is designed to insure the normal relationship between the physician, the patient, and the pharmacist. The National Kidney Disease Foundation only assists in providing medication at a low cost. The drugs are supplied to the patients at the actual cost to the Foundation. The nominal mailing and handling costs are borne by the Foundation as a result of public support of its programs. Registration forms are available to physicians from the Foundation's offices at 342 Madison Avenue, New York 17, N. Y.

WALLACE W. McCRORY, M.D.
Chairman, Direct Services Committee,
Scientific Advisory Board,
National Kidney Disease Foundation

Clinical Center Study of Craniofacial Malformations in Infants

THE COÖPERATION OF PHYSICIANS and dentists is requested in the referral of patients for a study of congenital malformations of the mouth and pharynx associated with difficulty in respiration and feeding. This study is being conducted by the National Institute of Dental Research in the Clinical Center of the National Institutes of Health, Bethesda, Md.

Particularly needed are young infants with Pierre Robin syndrome, having hypoplasia of mandible, ptosis of tongue, and cleft palate, resulting in disability of suckle feeding, failure to thrive, choking or breath-holding spells and inspiratory stridor.

Another group of investigators is interested in patients with cleft palate (ages 7–12), open bite (ages 10–15), micrognathia, early prognathism, and certain types of facial asymmetries.

Physicians and dentists who wish to have their patients considered for these studies may write or telephone Dr. Yas Takagi, Oral and Pharyngeal Development Section, National Institute of Dental Research, Bethesda 14, Md.; telephone: 49-64631 (Area Code 301).

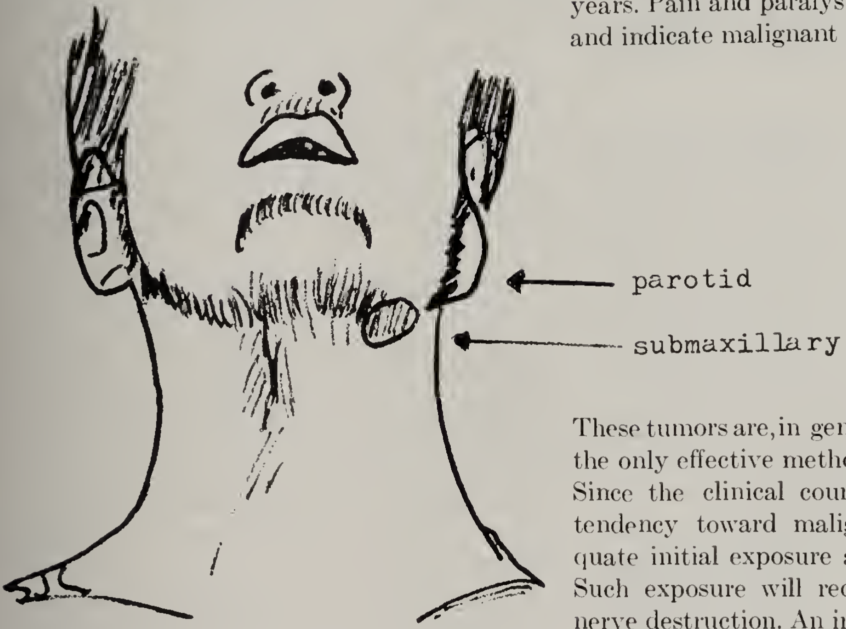
TUMORS OF THE SALIVARY GLANDS

Tumors occur——

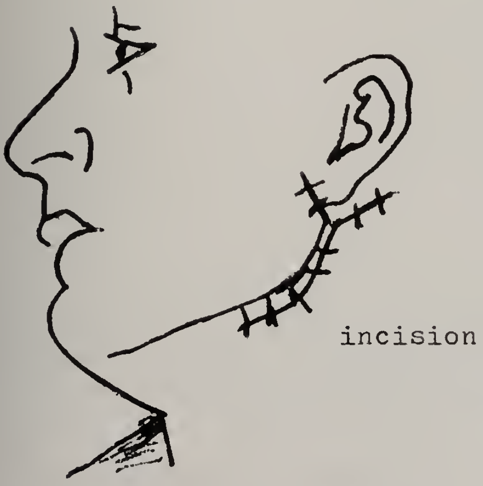
Most frequently in the Parotid (85 per cent)
Occasionally in the Submaxillary (10–15 per cent)
Rarely in the Sublingual Gland

The symptom most noted is the discovery of a "lump" generally present several months or even years. Pain and paralysis (facial) are late findings and indicate malignant change and invasion.

Look for tumors in these areas



These tumors are, in general, not radiosensitive and the only effective method of treatment is surgical. Since the clinical course is progressive, with a tendency toward malignant degeneration, adequate initial exposure and excision are required. Such exposure will reduce the chance of facial nerve destruction. An incision usually in the form of a "Y" as shown will prove satisfactory.

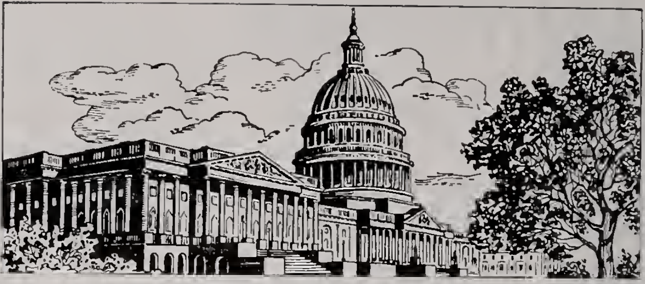


RESEARCH
EDUCATION
SERVICE

The booklet, "Trends and Practices in Cancer Diagnosis and Treatment," is available to physicians upon request.

Call or Write

AMERICAN CANCER SOCIETY
District of Columbia Division, Inc.
810–18th Street, N.W.
Washington, D.C. 20006
Executive 3-3690



NEWS & PERSONALS

Boards & Committees

The regular meeting of the **Executive Board of the Medical Society of the District of Columbia** was held, July 29, in the Medical Society's building at 7:30 p.m. Dr. W. LeRoy Dunn, Chairman, presided. Present were Drs. Karl C. Corley, Edward W. Nicklas, Duane C. Richtmeyer, Raymond T. Holden, J. Spencer Dryden and Victor R. Alfaro. Also present were Drs. Grace H. Guin, C. Willard Camalier, Jr., Jonathan M. Williams, and Mr. George Cooley, Secretary.

Committee Meetings

The Secretary reported the following Committee meetings held since the Board last met:

July 11	Liaison Committee with the Clergy
16	Grievance Committee
16	Committee on Public Health
17	House Committee
19	Review Board for Prepaid Medical Care Benefits

House Committee

Dr. Alfaro, Chairman of the House Committee, reported in detail on the efforts of that Committee in disposing of the present property and securing a new site. The Committee was authorized to continue along its present lines of activity and to keep the Executive Board informed in the event a special meeting is necessary.

August 12 Meeting

The Executive Board held a special meeting, August 12, to complete the agenda of its regularly scheduled meeting (July 29). Dr. Dunn presided.

Present were Drs. Corley, Nicklas, Alfaro, Richtmeyer, Dryden, Holden, and Mr. Cooley, Secretary. Also present were Drs. Guin, Camalier, John W. Latimer, Jr., and Harold M. Hobart.

Finance Committee

The Chairman of the Finance Committee reviewed the first quarter's "Income and Expense," comparing its data with the estimated budget for that period. The report was approved as submitted.

The Chairman reviewed a study that had been made of the operations of the MEDICAL BUREAU, pointing out that the number of calls had increased over the past 10 years almost 100 per cent, from 445,000 in 1953 to 822,000 estimated for 1963. During this same period the number of subscribers to the BUREAU increased only about 5 per cent, from 745 to 788, and the number of operators only about 20 per cent, from 25 to 30. It was agreed that if the BUREAU is to operate efficiently, the Finance Committee should be authorized to increase the rates for the BUREAU's services so as to make possible the employment of additional operators to provide more satisfactory service. It was reported that the Medical Bureau Committee will meet to discuss this and make specific recommendations to the Finance Committee.

The Executive Director was authorized to investigate the possibility of installing a more modern system of bookkeeping to reduce the work load and to provide for a less costly system of audit.

House Committee

Dr. Alfaro reported that a tentative agreement had been made for the sale of 1710-1718 M Street and that the attorneys were now working on the details of the contract.

Committee on Public Health

Drs. Latimer and Hobart reported on plans being worked out with the D. C. Health Department for August 28. Dr. Latimer and the Committee on Emergency Medical Service were authorized to coöperate with the Health Department, to seek assistance from the Society membership and the coöperation of local hospitals, and to represent the Executive Board in any conferences concerned with projected programs for this date. Dr. Latimer was requested to check immediately to assure that all steps necessary had been taken for the success of any first-aid project or program developed for this day.

A recommendation of this Committee concerning the development of an essay contest for high school students on the subject of Water Pollution was approved. The Committee was requested to report back to the Executive Board on specific details for such a project.

The Board voted to refer back to the Committee on Public Health its report and recommendations on the New Organizational Plan of the Health Department, with the request that this entire matter be given careful study.

Committee on Public Policy

It was agreed to support the recommendation of this Committee to approve S.933, which would permit practical nurses in the Washington Metropolitan Area to obtain a District of Columbia license, provided that there is no relaxation in the standards for practical nurses nor in the surveillance of proper and adequate policing of these standards.

The Board supported the Committee in disapproval of S.1402, a bill to exempt doctors employed by the District of Columbia Government who have licenses elsewhere in the United States from having to be licensed in the District.

The Board supported the Committee in opposing any change in the Licensing Act to substitute endorsement for reciprocity.

It supported the Committee in opposing the licensing of psychologists.

Dates for Scientific Assembly

The Executive Director was authorized to select dates for the 1964 and 1965 ASSEMBLIES which would not conflict with the Southern Medical Association meeting or the meetings of the American Academy of Pediatrics and the American College of Surgeons.

Cancer Morbidity Review Committee

It was reported that the D. C. Chapter of the American Cancer Society had not renewed the grant for continuation of this study.

A request from this Committee to circulate a report on its study, entitled "Minimal Standards for the Diagnosis, Evaluation and Treatment of Pelvic Malignancies," was discussed at length. It was agreed that the Chairman of the Committee be requested to revise certain portions of the study report for presentation in the MEDICAL ANNALS so that the Society would not be placed in the position of endorsing rigid standards.

Annals Advertising Rates

Approval was given to a 15 per cent increase in advertising rates for the ANNALS to be retroactive to July 1 or at the completion of individual contracts.

Other Business

Dr. Corley reported on his unsuccessful efforts to get a letter to the Editor of *The Washington Post* published in that newspaper, such letter having to do with a derogatory cartoon published on July 4.

The Board voted to prepare a testimonial to Miss Louise Eckburg, Assistant Editor of the MEDICAL ANNALS, in appreciation for her 25 years of service to the Society.

A program sponsored by the Washington Chapter of the American Dietetic Association, entitled "Dial a Dietitian," was approved.

Allotments of $50 each were made to Dr. Allan B. Coleman and Dr. C. K. Fraser in order for them to attend the AMA Child and Welfare Conference in West Virginia during October.

The President's appointments of Dr. W. Ross Morris and Dr. Allan M. McKelvie, replacing Drs. Philip A. Caulfield and Carl Berg, to the Review Board for Prepaid Medical Care Benefits were approved.

The President's nominees, 21 in number, as a Nominating Committee slate, to be submitted to the membership in October for balloting, were approved.

Meetings

Plastic surgeons throughout the world are invited to participate in the **Third International Congress of Plastic Surgery,** to be held at the Sheraton-Park Hotel, Washington, D. C., October 13–18, 1963. Hosts are the American Society of Plastic and Reconstructive Surgeons and the American Association of Plastic Surgeons.

Registration fee for members of both these organizations is included in their dues. For plastic surgeons who are not members there is a registration fee of $50.00. Individuals interested in plastic surgery and invited by or approved by members of the above organizations may attend by paying the registration fee of $50.00.

Beginning Monday morning, October 14, dual scientific sessions will be held with simultaneous interpretation into English, French, Spanish and German. Presentations will include the following subjects: Breast; Burns; Cleft Lip and Palate and Pharyngeal Flaps; Hand; Ear; Esthetic Surgery; Facial Defects, Deformities, and Fractures; General Plastic Surgery; Genitourinary; Hand; Head and Neck; and Wound Healing.

A number of social activities have been arranged, including a concert by the National Symphony Orchestra, a tour of the White House, and a boat trip to Mt. Vernon. The closing social event will be the banquet on Thursday evening, October 17.

All inquiries concerning the Congress should be addressed to Dr. T. Ray Broadbent, Acting Secretary-General, 508 East South Temple, Salt Lake City 2, Utah.

Dr. Averill A. Liebow, of New Haven, Conn., will give the **Second Annual D. C. Thoracic Society Lecture** on Monday evening, October 21. Dr. Liebow is Professor of Pathology at Yale University School of Medicine; his subject will be "The Interstitial Pneumonias."

All physicians and allied scientists are invited to attend the lecture and the cocktails and dinner preceding. For the latter there is a charge of $6.50. Those who wish to attend the lecture only may do so without charge and no reservations are necessary. Dinner will be served at the Walter Reed Army Officers' Club; the lecture will be in the Sternberg Auditorium of the Walter Reed Army Institute of Research. Reservations for the dinner must be received at 1714 Massachusetts Avenue, N.W., Washington, D. C. (20036) no later than October 17.

The American College of Gastroenterology announces its **28th Annual Convention and Postgraduate Course** at the Shoreham Hotel, Washington, October 20–26. The Scientific Session is scheduled for the first 3 days, October 21, 22 and 23. The opening session, October 21, will be a Panel Discussion on Amebiasis, with participation by members of the National Institutes of Health. Moderator will be Dr. Henry A. Monat, who is Governor of the College for the District of Columbia. Dr. Monat and Dr. Jacob J. Weinstein are in charge of local arrangements for the meeting. The preliminary program indicates participation by many Washington physicians, as well as speakers from many other cities.

The Postgraduate Course in Gastroenterology, to follow the Annual Meeting, will be given, October 24, 25 and 26. Moderators for the course will be Dr. I. Snapper, Director of Medical Education, Beth-El Hospital, Brooklyn, N. Y., and Dr. Robert J. Coffey, Professor of Surgery, Georgetown University School of Medicine. The faculty for the course will be drawn from the medical schools in and around Washington. A clinical session will be held at the Veterans Administration (Mt. Alto) Hospital.

The Second National Congress on Medical Quackery will be held, October 25 and 26, at the Sheraton-Park Hotel in Washington, D. C. The Congress will be sponsored jointly by the American Medical Association and the Food and Drug Administration. The first Congress was held in October, 1961, with the same sponsors.

Objectives of the Second Congress will be to bring together all major American groups concerned with efforts to safeguard the public against useless cures, mechanical gadgets, food fads and other quack devices and worthless treatment. The meeting will also seek to determine why the public is vulnerable to quackery and what is needed in health education to help the public protect itself against health charlatans.

The American Association of Medical Assistants will hold its Seventh Annual Convention, October 9–13, in Miami Beach, Fla. Headquarters will be the Eden Roc Hotel. Among those listed on the scientific program is Dr. William F. Sheeley, of Washington, who will take part in a panel review of mental health problems frequently seen in the doctor's office.

AAMA now has 35 constituent state chapters, with a total of 11,000 members. About 500 of them are expected to attend the national meeting, according to Miss Alice Budny of Milwaukee, Wis., who is President.

The 17th World Medical Assembly will convene in New York City, October 13–19, 1963, at the Commodore Hotel. This meeting was originally scheduled for Mexico City. The host for the Assembly will be the American Medical Association.

Dr. Edward R. Annis, President-elect of the

AMA, has been nominated as President-elect of WMA and will preside over the meeting, the theme of which is "Frontiers in Medicine." Chairman of the Scientific Program is Dr. John R. Heller, President and Chief Executive Officer of the Memorial Sloan-Kettering Cancer Center. He was formerly with the Public Health Service in Bethesda, Md. He will be assisted by Dr. Henry T. Randall, Clinical Director, Memorial Hospital for Cancer and Allied Diseases, New York. Dr. Howard A. Rusk, Director of the Institute of Physical Medicine and Rehabilitation in New York will be Protocol Consultant. In addition to the lectures and clinical program, there will be an international medical film exhibition organized by Mr. Ralph Creer, Associate Director of the AMA Department of Scientific Assembly.

Secretary-General of the Association is Dr. Harry S. Gear, 10 Columbus Circle, New York 19, N. Y.

The District IV Meeting of the American College of Obstetrics and Gynecology will convene at the Shoreham Hotel, November 7, 8 and 9. An ambitious program, which will appeal to nurses as well as to physicians in the field of obstetrics and gynecology, has been planned. Dr. Philip P. Steptoe is Chairman of the Committee on Arrangements.

Dr. James C. Walsh has programmed instructive sessions for nurses on all 3 days. Especially invited are the hospital nursing staffs who care for OB-GYN patients, Public Health and Visiting Nurses interested in this field, and nurse-employees of obstetricians and gynecologists.

Dr. James A. Dusbabek is in charge of the scientific program for obstetricians and gynecologists, with lectures scheduled for November 8 and 9.

Further information will appear in the October issue of the Medical Annals.

General News

Vaccination against cholera has been recommended by Dr. Luther L. Terry, Surgeon General of the Public Health Service, for all travelers to Asia and the Western Pacific except babies less than 6 months old. The vaccination consists of 2 inoculations 7 to 10 days apart. For adequate protection, the second inoculation should be obtained not less than 6 days before departure.

Cholera, which is endemic in India and Pakistan, has spread to Burma, Indonesia, Macao, Malaya, Thailand, Hong Kong, the Philippines, and Sarawak.

Travelers entering the United States from cholera-infected areas are being required to present a valid international certificate of vaccination against cholera in the past 6 months.

Official information on overseas health hazards and on required and recommended vaccinations for international travel is available from the Division of Foreign Quarantine, Public Health Service, Washington, D. C. (20025).

The American Thoracic Society invites submission of papers on all scientific aspects of tuberculosis and nontuberculous respiratory and cardiopulmonary diseases for presentation at its 1964 Annual Meeting, to be held in New York City, May 25–27. Membership in the Society is not a prerequisite for participation on the program. Abstracts of papers should be submitted before January 6, 1964, to the Chairman of the Medical Sessions Committee, Dr. Robert Oseasohn, American Thoracic Society, 1719 Broadway, New York 19, N. Y.

The American Association for the Study of Headache was founded in 1959 for the purpose of providing an open forum where physicians in the various fields of medicine could present their ideas and beliefs concerning the pathophysiology, etiology, diagnosis and treatment of various forms of headache and other head pain. Its official journal, *Headache*, was launched in 1961. All papers and discussions presented at the Fifth Annual Meeting, held in Atlantic City, N. J., June 15, will be published during the coming year.

Dr. Lester S. Blumenthal, of Washington, was elected Secretary for 1963–64 at the recent business meeting. The new president is Dr. John P. McGovern, of Houston, Texas, formerly a pediatrician in Washington, D. C.

The Sixth Annual Meeting will be held in San Francisco on June 20, 1964. Those interested in joining the Association or in attending this meeting may contact Dr. Blumenthal, 5315 Connecticut Avenue, N.W., Washington, D. C. (20015), for application forms.

The Section on Radiology of the Medical Society of the District of Columbia elected the following officers at its May meeting:

Dr. William E. Sheely, *President*; Dr. Melvin O. Goodman, *Vice President*; and Dr. Martin A. Thomas, *Secretary-Treasurer*.

The Washington Psychoanalytic Society elected officers, May 17. They are:

Dr. Sidney Berman, *President*; Dr. Donald L. Burnham, *Vice President*; Dr. Christopher T. Bever, *Secretary*; and Dr. Seymour J. Rosenberg, *Treasurer*.

The Jacobi Society of Washington also has new officers, elected May 20:

Dr. Saul Zukerman, *President-elect*; Dr. Norman H. Isaacson, *Vice President*; Dr. Jason Geiger, *Secretary*; and Dr. Morris Krucoff, *Treasurer*.

Dr. Harvey H. Ammerman was installed as President for 1963–64.

The headquarters office of the **National Medical Foundation for Eye Care** has been installed at 1100—17th Street, N.W., Suite 6, Washington, D. C. It was formerly located in New York City. Upon completion of the transfer, Mr. Lawrence A. Zupan took over duties as Executive Secretary, succeeding Mr. James E. Bryan. The new telephone number is 347–3447.

Among 44 grants awarded in August by the Neurological and Sensory Disease Service Program of the Public Health Service, 3 were allocated to the District of Columbia. **The Research Foundation of Children's Hospital** will receive $14,225 for postgraduate training in selected neurological aspects of pediatrics. Dr. Richmond S. Paine will be project director.

Georgetown University Medical Center was awarded $22,042 for a training program for ophthalmic assistants. In charge of the project will be Dr. Peter Y. Evans, Assistant Professor of Ophthalmology, an Associate member of the D. C. Medical Society.

The largest grant of the three, $55,350, went to **American University and Greater Washington Educational Television Association** to develop a basic course of TV lessons in lipreading.

The Reverend Mark H. Bauer, S.J., has been appointed **Vice President for Medical Center Affairs at Georgetown University,** succeeding the late Reverend Joseph F. Cohalan, S.J.

Father Bauer is a distinguished scientist and has been doing research in cardiovascular physiology under a grant from the American Heart Association. In 1958 he came to Georgetown from St. Joseph's College, Philadelphia, where he had been Chairman of the Department of Biology for 8 years. As a member of the faculty at Georgetown, he has served as Associate Professor of Biology, Research Associate in the Department of Physiology and Biophysics, and Special Lecturer in Medical Genetics.

Brig. General Conn L. Milburn, Jr., MC, who was Director and Commandant of the Walter Reed Army Institute of Research from 1961 to 1963, was **appointed Deputy Surgeon General of the Army,** effective July 29. He succeeds Major General Howard W. Doan, MC. Colonel Milburn was a Consulting Editor to the MEDICAL ANNALS, representing Walter Reed Army Medical Center, from 1961 to 1963. He was recently promoted to Brigadier General and named Director of the Personnel and Training Directorate Office of the Surgeon General.

Dr. Stanley F. Yolles has been **named Deputy Director of the National Institute of Mental Health.** For the past 3 years he has been Associate Director of Extramural Programs for NIMH. He is a medical graduate of New York University College of Medicine and holds a Master of Public Health degree from Johns Hopkins University Medical School. NIMH is the first of the 9 institutes of NIH to appoint a Deputy Director.

Two long-time employees of the D. C. Medical Society have resigned and taken new employment. **Miss Mary M. McCambridge,** known to most MEDICAL BUREAU subscribers as "Miss Mac," left on July 31. She has been Supervisor of the BUREAU for over 16 years. **Miss Lois O. Ryder,** who has been the Medical Society's Bookkeeper since 1952, is also well known to many members of the Society. Both employees left with regrets and many good wishes from their fellow-workers.

Personals

Dr. Daniel J. Abramson has been officially commended for meritorious service as Medical Officer in General Surgery, Department of Hospital Clinics, Walter Reed General Hospital, January 1962–63. According to the citation, he "has established standards that are of immeasurable value to the surgical residents assigned to the Department of Hospital Clinics. His contributions to the development of a modified exteriorization or marsupialization procedure in the treatment of pilonidal cysts and sinuses and outpatient procedures in breast biopsies are highly significant, successful innovations in patient care."

Dr. Lawrence S. Lilienfield has been appointed Chairman of the Department of Physiology and Biophysics at Georgetown University School of Medicine, effective July 1. He succeeds Dr. John C. Rose, who is now Dean of Medicine at Georgetown.

He is Attending Physician at Georgetown University, D.C. General, and Mt. Alto Veterans Administration Hospitals. He is a diplomate of the American Board of Internal Medicine, a Fellow of the American College of Physicians, an Associate member of the D. C. Medical Society, and a member of many other scientific organizations.

Dr. Joseph B. Davis, an Associate member of the D. C. Medical Society, was elected Secretary of the American College of Legal Medicine at its recent annual meeting in Atlantic City, N. J., prior to the AMA meeting. Dr. Charles U. Letourneau, Editorial Director of *Hospital Management*, Chicago, was elected President of the College.

Members of the College, many of whom hold degrees both in law and medicine, specialize in the legal aspects of the medical profession. Dr. Davis holds an administrative position with the Food and Drug Administration.

Dr. Aaron Deitz, Hyattsville, Md., has been reëlected Chairman of the Maryland State Board of Health and Mental Hygiene. He was appointed by Governor Tawes in 1959 to the State Board of Health and reappointed in 1961 to the newly created Board of Health and Mental Hygiene, which has 11 members, for a term of 6 years. An Associate member of the D. C. Medical Society, he is Chief of the Department of General Practice at Prince George's County General Hospital.

Dr. Deitz was recently appointed by Governor Tawes to the Maryland Commission for the 1964–65 New York World's Fair.

Dr. Habeeb Bacchus was certified by the American Board of Internal Medicine in June.

Dr. Catharine Knop, well known pediatrician at the Yater Clinic, has returned to Washington after spending the month of June as part of a medical team in Algeria, where MEDICO has been conducting an emergency program since last fall. The American team worked at Algeria's largest hospital, Beni Messous. Dr. Knop has promised to relate some of her experiences for publication in the MEDICAL ANNALS.

AL FIGHTER SC
NATIONAL GU

COLONEL WILLIAM H. BEARD (left) receives the D. C. National Guard's Meritorious Service Medal, June 22, from Major General William H. Abendroth, Commanding General of the D. C. National Guard. Colonel Beard, Commander of the 113th Tactical Fighter Wing Hospital, retired, July 8, after completing 30 years' service with the National Guard and Reserve.

Dr. H. J. Russell McNitt, well known obstetrician and gynecologist, has retired from practice in the District of Columbia and moved to Salt Lake City, Utah. His address is 1486 Ramona Avenue.

Dr. McNitt, an alumnus of George Washington University School of Medicine, was on the staff of Columbia Hospital for Women as Senior Attending in Gynecology for many years. He was also on the executive and teaching staffs of Doctors Hospital. During World War II he served in the Medical Corps of the Army for 5 years, with 2½ years of overseas duty in the Southwest Pacific, where he was Chief of the Surgical Service of the 172nd Station Hospital. He held the rank of Lt. Colonel.

QT Washington, Inc.

In the field of patient rehabilitation an increasingly greater role is played each year by lay organizations. Conditions that require constant care by the patient himself or are socially embarrassing have given particular impetus to mutual-aid societies for "qualified" members. Organized self-help has in some cases become an important tool at the disposal of the physician in teaching his patient to live with a handicap.

QT Washington, Inc. was organized in 1957 as a mutual-aid group for "ostomy" patients in the Washington Metropolitan Area. It is one of over 50 groups located in or near large cities throughout the United States and Canada. Although limited to "ostomy" patients, it is nonsegregated, nonsectarian and nonprofit. As a lay organization it scrupulously avoids medical matters.

Activities include monthly meetings which give members an opportunity to pool and exchange practical and technical information. A visiting activity to prospective and new "ostomy" patients is well organized and controlled. All visits are cleared through the physician, and the extent of the advice given is limited to nonmedical matters, such as availability of appliances and supplies, methods of application of appliances, care of skin, etc. The important contribution at that time is to reassure the patient that he can eventually resume normal activities.

Monthly bulletins are published which contain information on new products and helpful hints. There is also a national quarterly publication.

Lectures are presented regularly to nurses' training classes in some Washington hospitals. In addition, at the invitation of hospital officials groups of the medical and surgical staffs are addressed by members of the organization to acquaint them with the existence of the QT clubs and their objectives.

The organization can be contacted through its officers. Mrs. Ernestine List (King 8–5581) is President; Mrs. Dorothy Rodgers (Spruce 3–1097 is Chairman of the Visiting Committee.

Julius Langsner
Editor, QT Washington, Inc.

Obituaries

Herman Hertzberg, M.D.

(1888–1963)

Dr. Herman Hertzberg, obstetrician and gynecologist in Washington for many years, died, July 9, 1963, at his home, 3145 Ellicott Street, N.W.

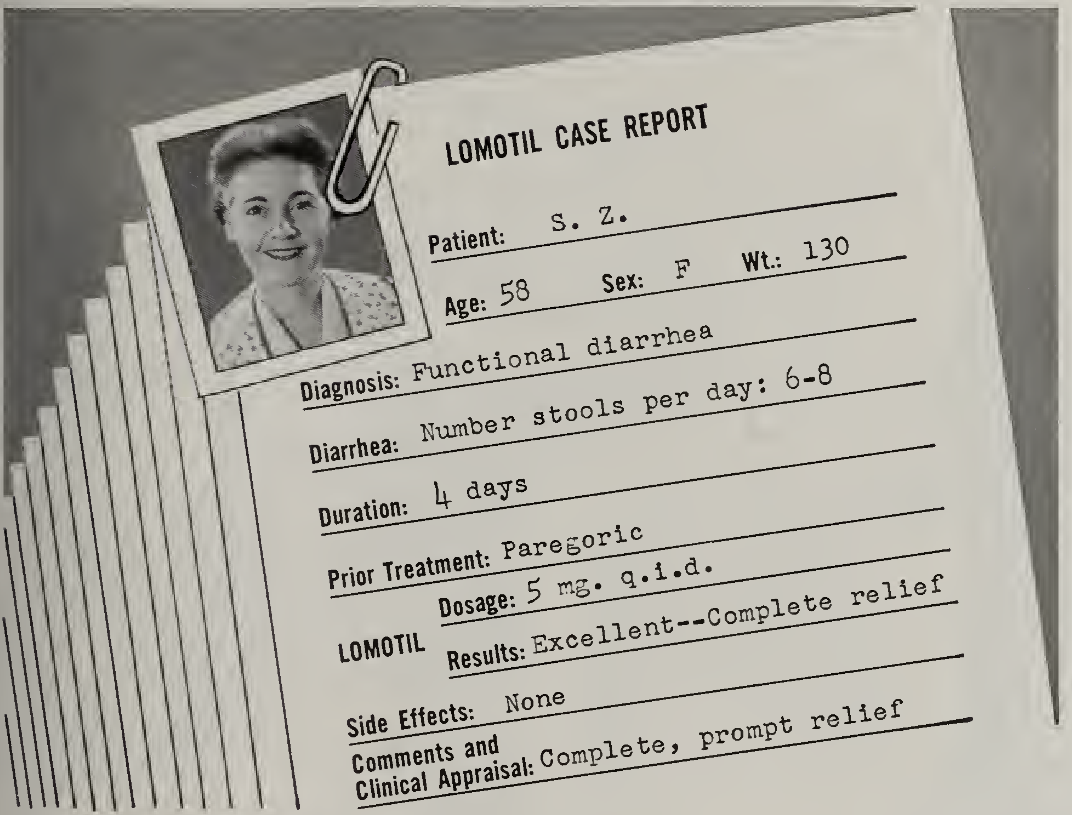
Dr. Hertzberg was born in Poland, July 25, 1888, and received his early education there. He received his medical degree from the Medical College of Virginia, Richmond, in 1913, and interned at St. Leo's Hospital in Greensboro, N. C., the following year. On June 2 of this year he was honored at his 50th Class Reunion in Richmond.

During World War I Dr. Hertzberg served in the Medical Corps of the Navy, as a surgeon at the Naval Medical School in Washington, regimental surgeon at Pelham Bay Park Naval Training Station, and as ship's surgeon on the *U.S.S. Tiger*.

After the War Dr. Hertzberg trained in his chosen specialty at New York Polyclinic Medical School and Hospital and at the medical center in Berlin, Germany. He was on the hospital staffs of Sibley, Doctors, and the Washington Hospital Center. He continued in the private practice of obstetrics until his recent illness.

He was certified by the American Board of Obstetrics and Gynecology. He was elected an Active member of the D. C. Medical Society in 1923. He was also a member of the American Medical Association, the Washington Gynecological Society, and a charter member of the Jacobi Medical Society. He belonged to the Washington Hebrew Congregation.

Surviving him are his wife, Mrs. Katherine Wolf Hertzberg, of the home address, and his daughter, Mrs. Fangette Enzel, of Washington. He is also survived by three sisters, Mrs. Esther Greenbaum and Mrs. Sarah Blotman, both of Richmond, Va., and Mrs. Mollie Greenbaum, of Los Angeles, Calif.



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Patient: S. Z.

Age: 58 Sex: F Wt.: 130

Diagnosis: Functional diarrhea

Diarrhea: Number stools per day: 6-8

Duration: 4 days

Prior Treatment: Paregoric

LOMOTIL Dosage: 5 mg. q.i.d.

Results: Excellent--Complete relief

Side Effects: None

Comments and Clinical Appraisal: Complete, prompt relief

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Each **tablet** and each 5 cc. of **liquid** contains: 2.5 mg. of diphenoxylate hydrochloride (Warning: may be habit forming) and 0.025 mg. of atropine sulfate

The direct, well-localized activity of Lomotil relieves spasm and cramping and provides prompt symptomatic control of virtually all diarrheas.

Numerous investigators have remarked on the effectiveness of Lomotil in patients with diarrhea uncontrolled by other agents.

Weingarten and his associates[1] found it "an excellent drug . . . efficacious where other drugs have failed. . . ."

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Lomotil is an exempt narcotic, its abuse liability being comparable to that of codeine. Recommended dosages should not be exceeded. Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. Lomotil is brand of diphenoxylate hydrochloride with atropine sulfate; the subtherapeutic amount of the latter is added to discourage deliberate overdosage.

1. Weingarten, B.; Weiss, J., and Simon, M.: A Clinical Evaluation of a New Antidiarrheal Agent, Amer. J. Gastroent. 35:628-633 (June) 1961. 2. Hack, C. W.: Relief of Diarrhea with Diphenoxylate Hydrochloride (Lomotil), J. Med. Ass. Georgia 50:485-488 (Oct.) 1961.

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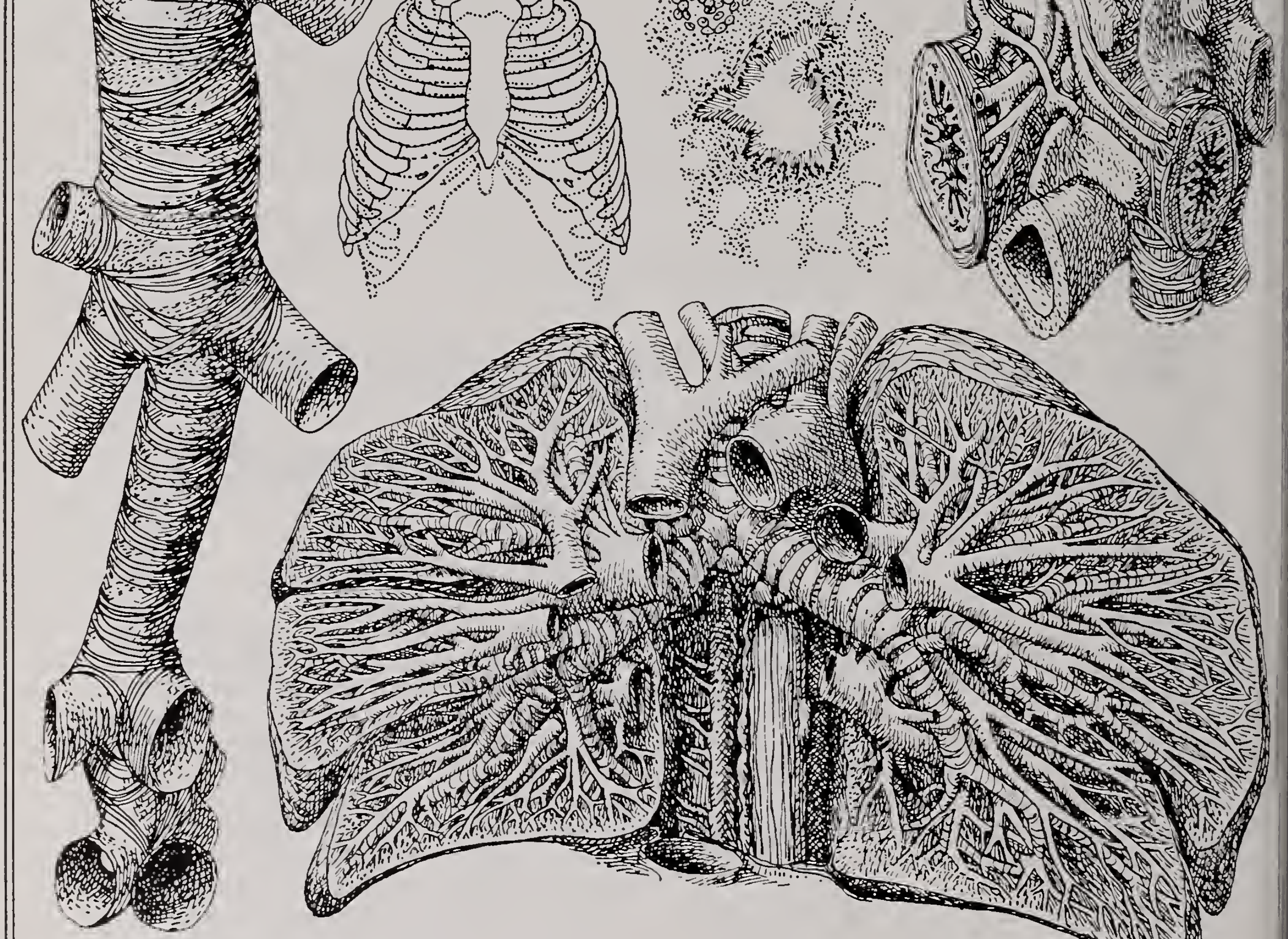
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ARISTOCORT Triamcinolone is indicated when anti-inflammatory, anti-allergic action of glucocorticoids is desired. SIDE EFFECTS of glucocorticoids generally: Cushingoid effects, hirsutism, leucopenia, purpura, vertigo, fatigue, increased hyperglycemia, osteoporosis, gastrointestinal hemorrhage, cataracts, growth suppression in children and increased intracranial pressure. Other glucocorticoid effects thought more likely to occur with triamcinolone: reversible weakness of muscles and flushing of face.

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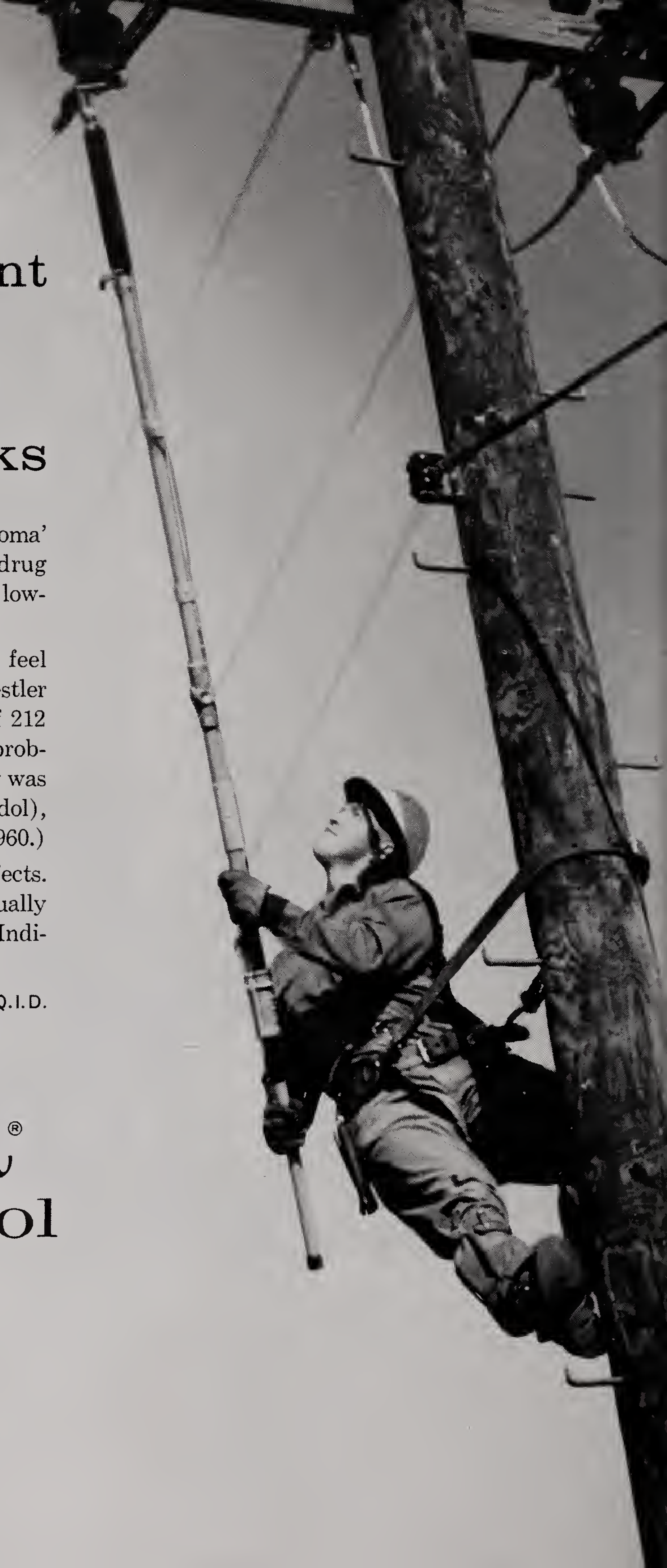

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Carisoprodol seldom produces side effects. Occasional drowsiness may occur, usually at higher than recommended dosage. Individual reactions may occur rarely.

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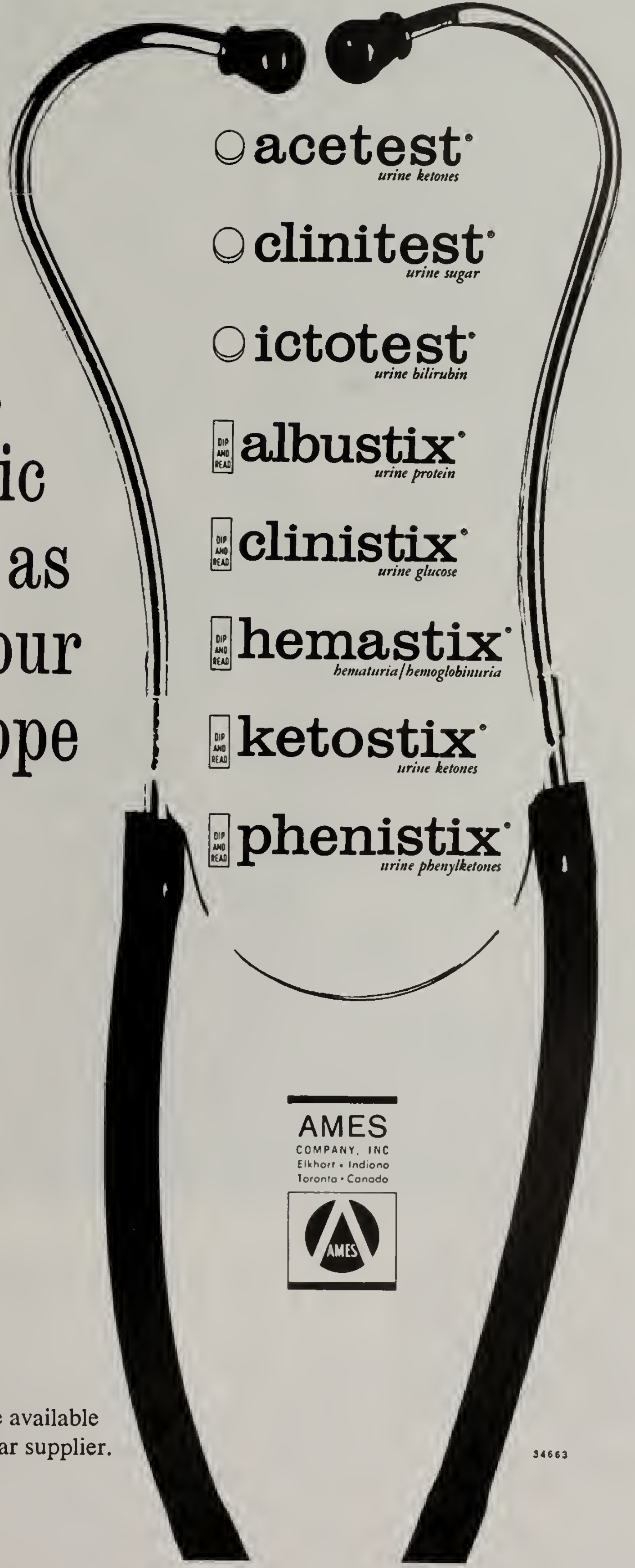

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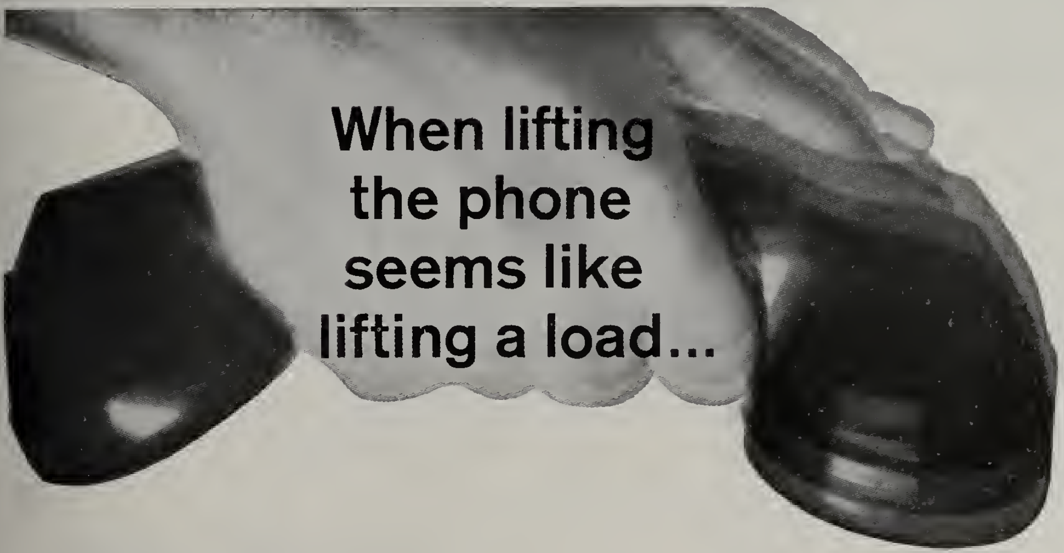

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ISUPREL (isoproterenol/Winthrop) "...can increase breathing efficiency in pulmonary emphysema."[1] The patient with chronic obstructive pulmonary disease "...should use the bronchodilator four times daily whether or not he experiences episodes of bronchospasm."[2]

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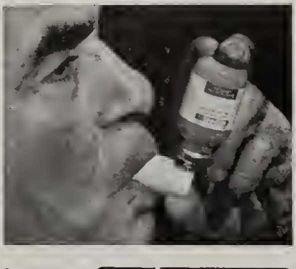
The Mistometer brings new efficacy and convenience—enables patients to maintain treatment wherever they are.

With use of ISUPREL (isoproterenol/Winthrop), occasionally tachycardia, palpitation, nervousness, nausea and vomiting or headache may occur, especially with excessive dosage. Adjust dosage carefully in patients with hyperthyroidism, acute coronary disease, cardiac asthma or limited cardiac reserve, and in persons sensitive to sympathomimetic amines.

Caution: Epinephrine should not be administered with ISUPREL (isoproterenol/Winthrop) as both drugs are direct cardiac stimulants and their combined effects may induce serious arrhythmia. If desired they may, however, be alternated, provided an interval of at least four hours has elapsed.

Dosage: Two inhalations at least one minute apart four times daily, regularly. Inhalations may be taken more often if indicated.

Available as ISUPREL HCl (isoproterenol HCl/Winthrop) Mistometer—single unit combining plastic nebulizer and ISUPREL (isoproterenol/Winthrop) solution 1:400—or 0.25 per cent w/w (=2.8 mg. per ml.), and includes alcohol, 33 per cent; bottles of 15 ml.



1. Reeves, J. E.: *M. Times* 90:512, May, 1962. 2. Williams, M. H., Jr.: *M. Sc.* 11: 433, March 19, 1962. 3. Peckenschneider, L. E.: *J. Kansas M. Soc.* 56:486, Sept., 1955.

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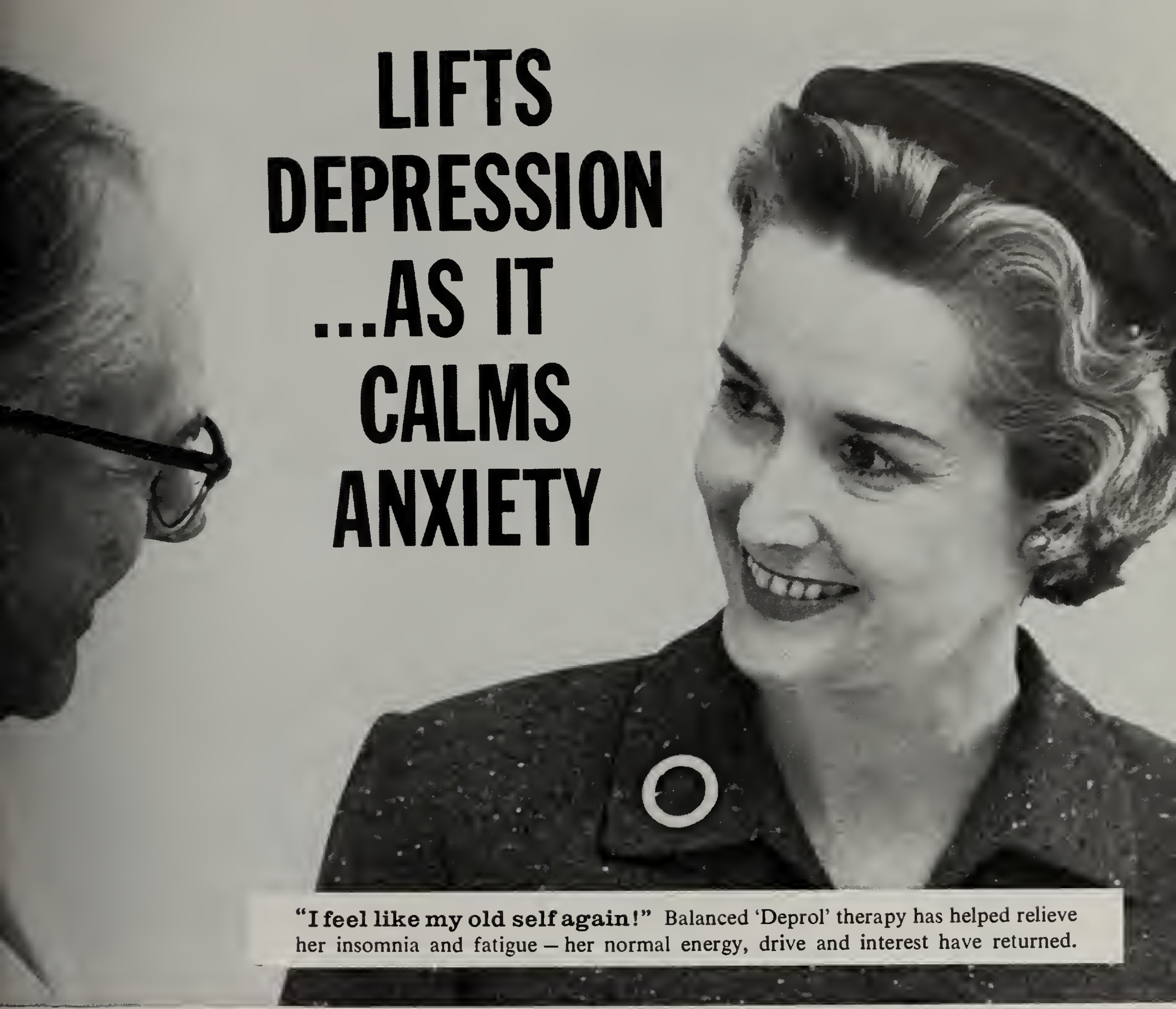

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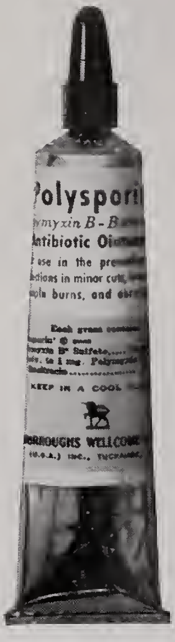
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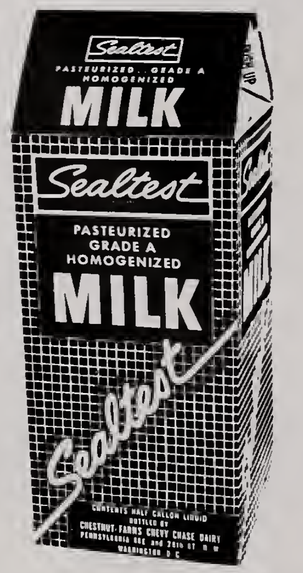
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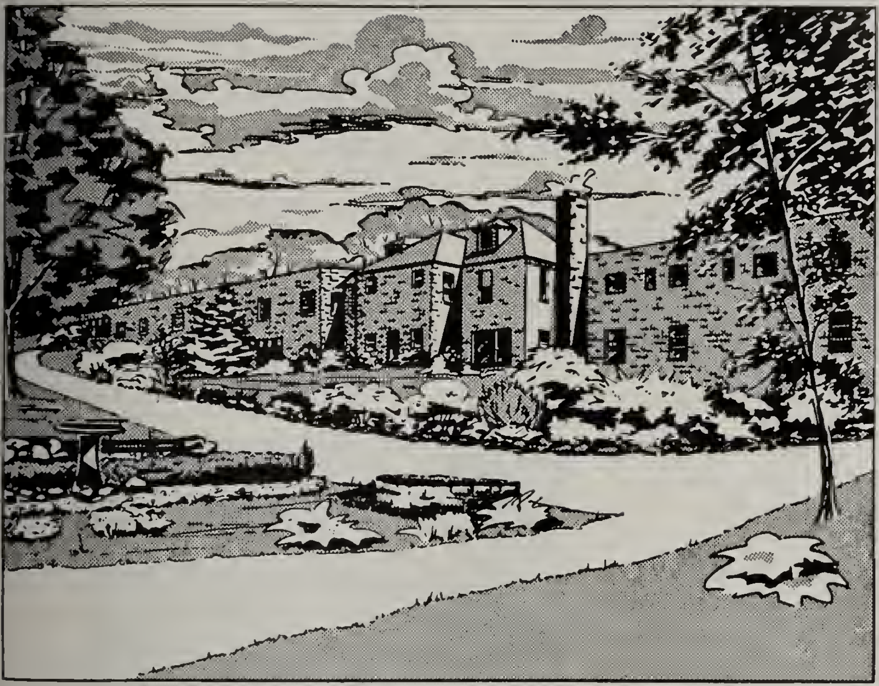

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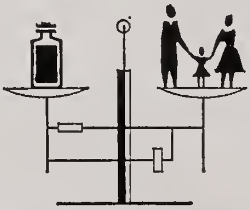

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October 5–10: American Academy of Pediatrics. Palmer House, Chicago. Address: Dr. E. H. Christopherson, *Executive Director*, 1801 Hinman Avenue, Evanston, Ill.

October 6–9: Medical Society of Virginia. Roanoke Hotel, Roanoke, Va. Address: Mr. Robert K. Howard, *Executive Secretary*, 4205 Dover Road, Richmond 21, Va.

October 7–10: 13th Annual Instrument Symposium and Research Equipment Exhibit. National Institutes of Health, Bethesda, Md. Address: Mr. James B. Davis, Executive Secretary, National Institutes of Health, Bethesda 14, Md.

October 13–18: Third International Congress of Plastic Surgery. Sheraton-Park Hotel, Washington. Address: Dr. Leslie H. Backus, Secretary-General, 217 Linwood Avenue, Buffalo 9, N. Y.

October 13–19: XVIIth World Medical Assembly. Commodore Hotel, New York. Address: Dr. Harry S. Gear, *Secretary-General*, World Medical Association, 10 Columbus Circle, New York 19, N. Y.

October 20–23: American College of Gastroenterology. Shoreham Hotel, Washington. Address: Mr. Daniel Weiss, Executive Director, 33 West 60th Street, New York 23, N. Y.

October 20–25: American Academy of Ophthalmology and Otolaryngology. New York Hilton Hotel, New York City. Address: Dr. W. L. Benedict, *Secretary*, 15th Second Street, S.W., Rochester, Minn.

October 21–22: 1963 Scientific Session: Conference on Unusual Forms and Aspects of Cancer in Man. Biltmore Hotel, New York. Address: Dr. Roald N. Grant, Director, Professional Education, American Cancer Society, Inc., 521 West 57th Street, New York 19, N. Y.

October 25–26: Second National Congress on Medical Quackery. Sheraton-Park Hotel, Washington. Address: Dr. F. J. L. Blasingame, Executive Vice President, American Medical Association, 535 North Dearborn Street, Chicago 10, Ill.

October 27: Association of Clinical Scientists. Hotel Statler-Hilton, Washington. Address: Dr. Robert P. MacFate, Secretary, 54 Hubbard Street, Chicago 10, Ill.

October 28–November 1: 50th Clinical Congress of American College of Surgeons. Fairmont and Mark Hopkins Hotels, San Francisco. Address: Dr. Samuel P. Harbison, *Secretary*, 40 East Erie Street, Chicago 11, Ill.

November 4–6: Association of Military Surgeons of the United States. Statler-Hilton Hotel, Washington. Address: Brig. Gen. Frank E. Wilson, Executive Director, 1500 Massachusetts Ave., N.W., Washington 5, D.C.

November 18–20: Annual Scientific Assembly, The Medical Society of the District of Columbia. Statler-Hilton Hotel, Washington. Mr. George W. Cooley, Executive Director, 1718 M Street, N.W., Washington 36, D. C.

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Classified advertisements of a professional nature are free to members.

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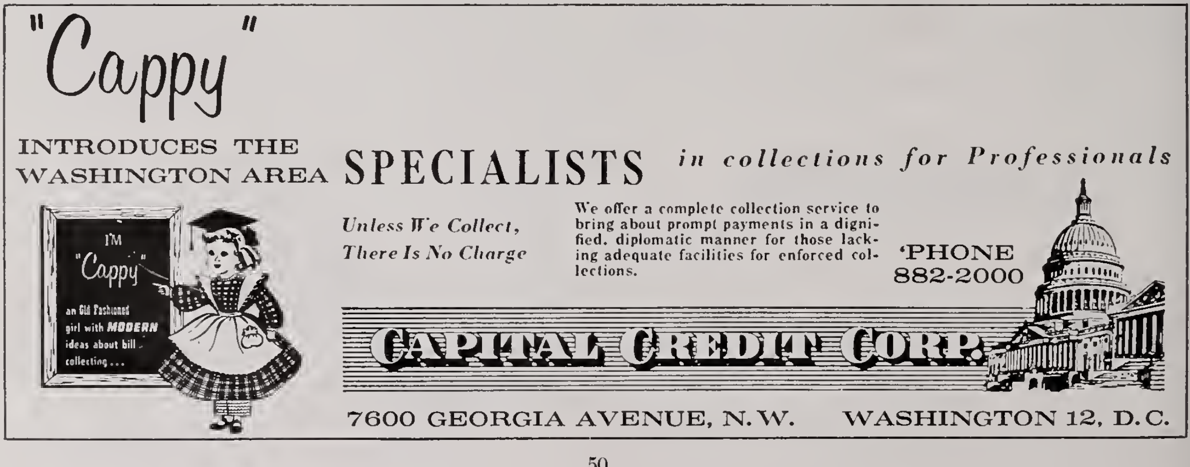
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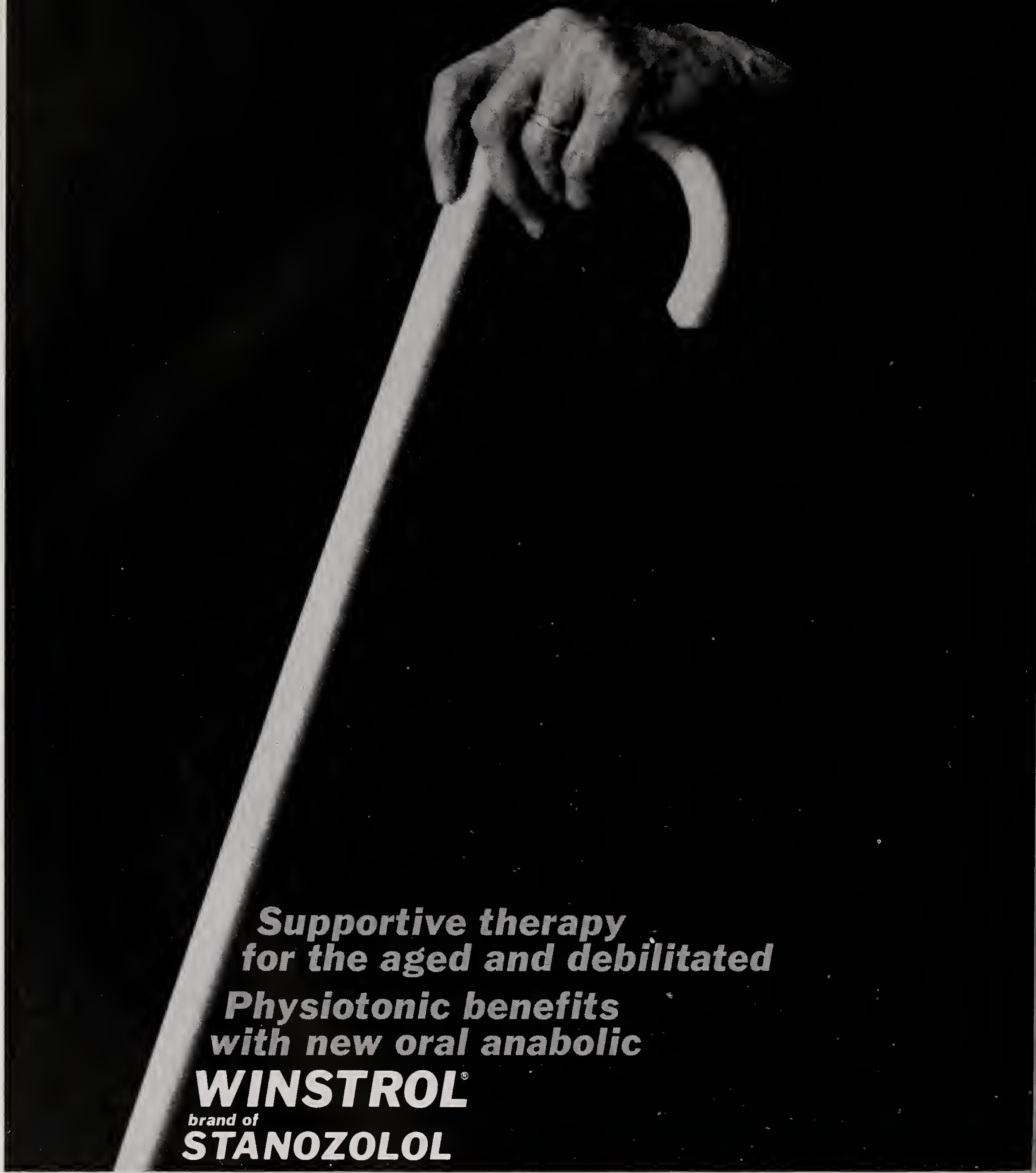

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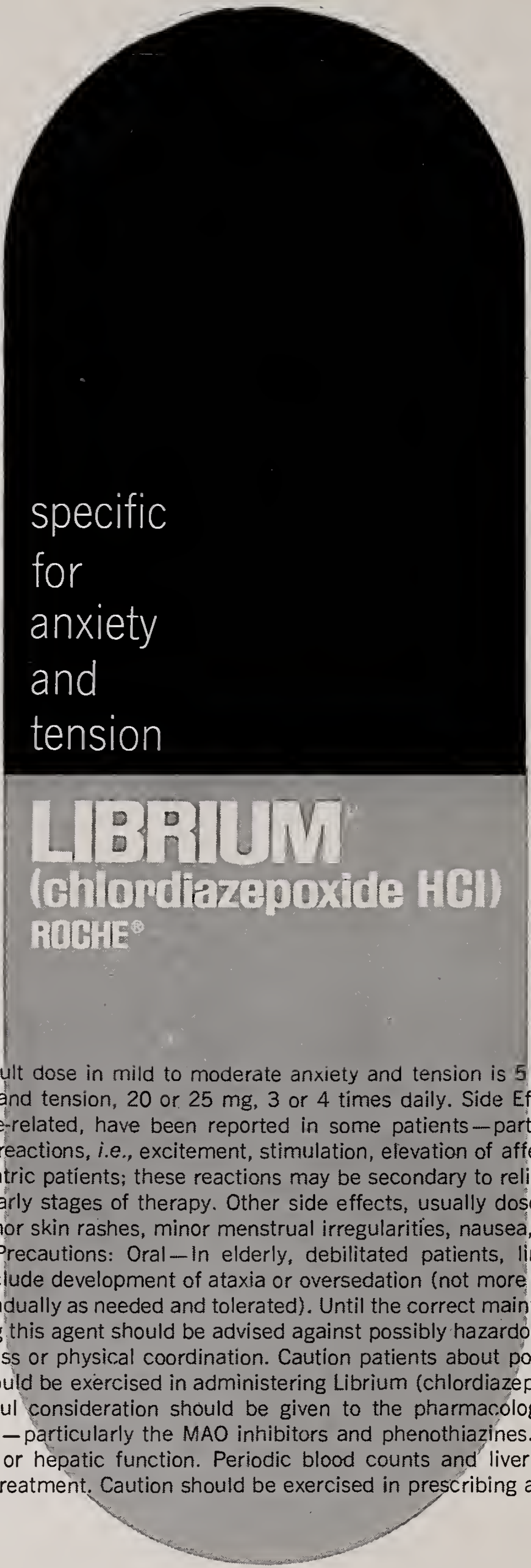

Dosage: Oral—Usual adult dose in mild to moderate anxiety and tension is 5 or 10 mg, 3 or 4 times daily; in severe anxiety and tension, 20 or 25 mg, 3 or 4 times daily. Side Effects: Oral—Drowsiness and ataxia, usually dose-related, have been reported in some patients—particularly the elderly and debilitated. Paradoxical reactions, *i.e.,* excitement, stimulation, elevation of affect and acute rage, have been reported in psychiatric patients; these reactions may be secondary to relief of anxiety and should be watched for in the early stages of therapy. Other side effects, usually dose-related, have included isolated instances of minor skin rashes, minor menstrual irregularities, nausea, constipation, increased and decreased libido. Precautions: Oral—In elderly, debilitated patients, limit dosage to smallest effective amount to preclude development of ataxia or oversedation (not more than 10 mg per day initially, to be increased gradually as needed and tolerated). Until the correct maintenance dosage is established, patients receiving this agent should be advised against possibly hazardous procedures requiring complete mental alertness or physical coordination. Caution patients about possible combined effects with alcohol. Caution should be exercised in administering Librium (chlordiazepoxide HCl) to addiction-prone individuals. Careful consideration should be given to the pharmacology of any agents to be employed concomitantly—particularly the MAO inhibitors and phenothiazines. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests may be advisable in protracted treatment. Caution should be exercised in prescribing any therapeutic agent to pregnant patients.

October, 1963 VOLUME XXXII • NUMBER 10

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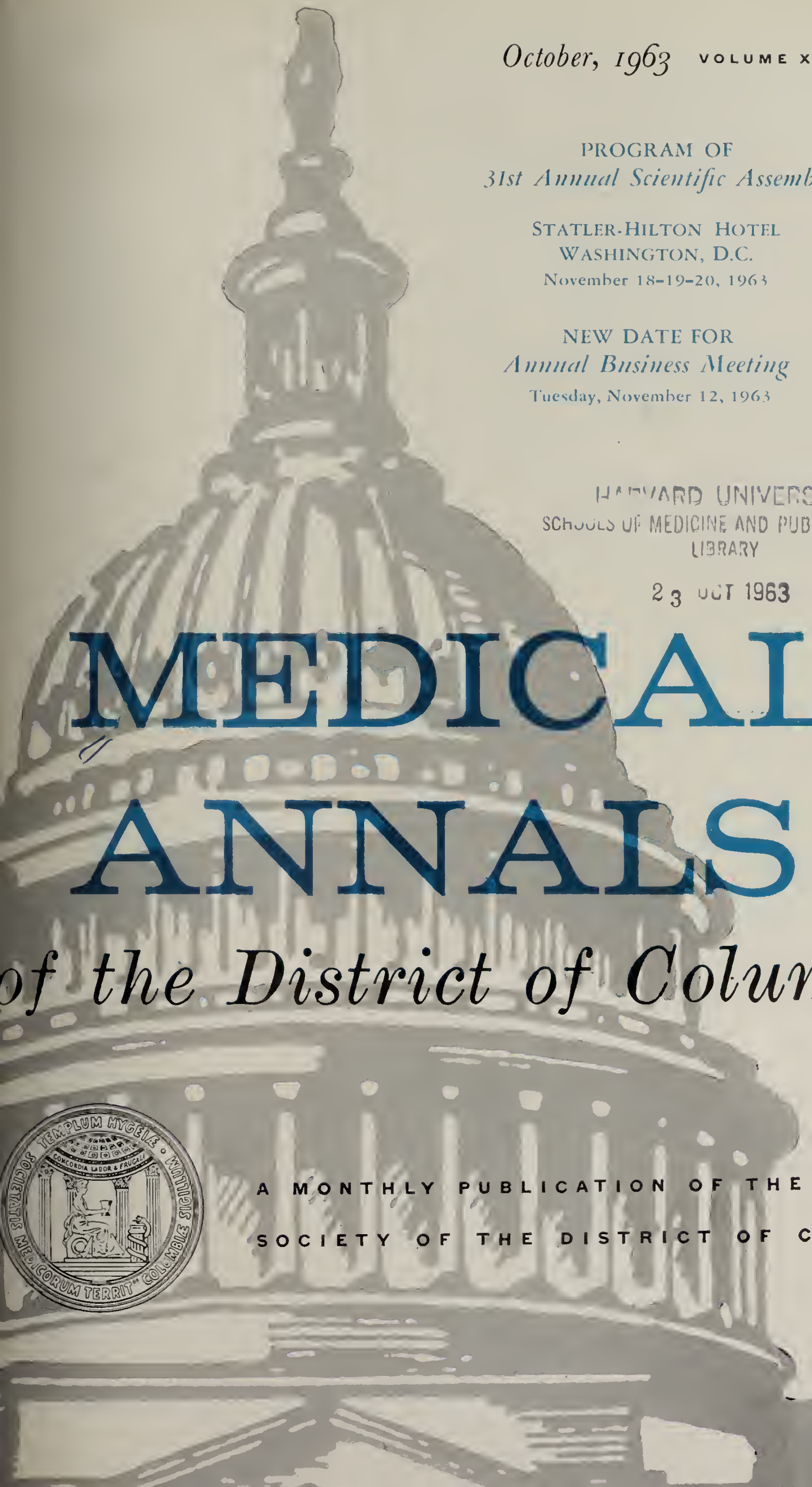

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REFERENCES: (1) Hammill, J. F.: J. Chron. Dis. 8:448, 1958. (2) Roseman, E.: Neurology 11:912, 1961. (3) Bray, P. F.: Pediatrics 23:151, 1959. (4) Chao, D. H.; Druckman, R., & Kellaway, P.: Convulsive Disorders of Children, Philadelphia, W. B. Saunders Company, 1958, p. 120. (5) Crawley, J. W.: M. Clin. North America 42:317, 1958. (6) Livingston, S.: The Diagnosis and Treatment of Convulsive Disorders in Children, Springfield, Ill., Charles C Thomas, 1954, p. 190. (7) Ibid.: Postgrad. Med. 20:584, 1956. (8) Merritt, H. H.: Brit. M. J. 1:666, 1958. (9) Carter, C. H.: Arch. Neurol & Psychiat. 79:136, 1958. (10) Thomas, M. H., in Green, J. R., & Steelman, H. F.: Epileptic Seizures, Baltimore, The Williams & Wilkins Company, 1956, pp. 37-48. (11) Goodman, L. S., & Gilman, A.: The Pharmacological Basis of Therapeutics, ed. 2, New York, The Macmillan Company, 1955, p. 187.

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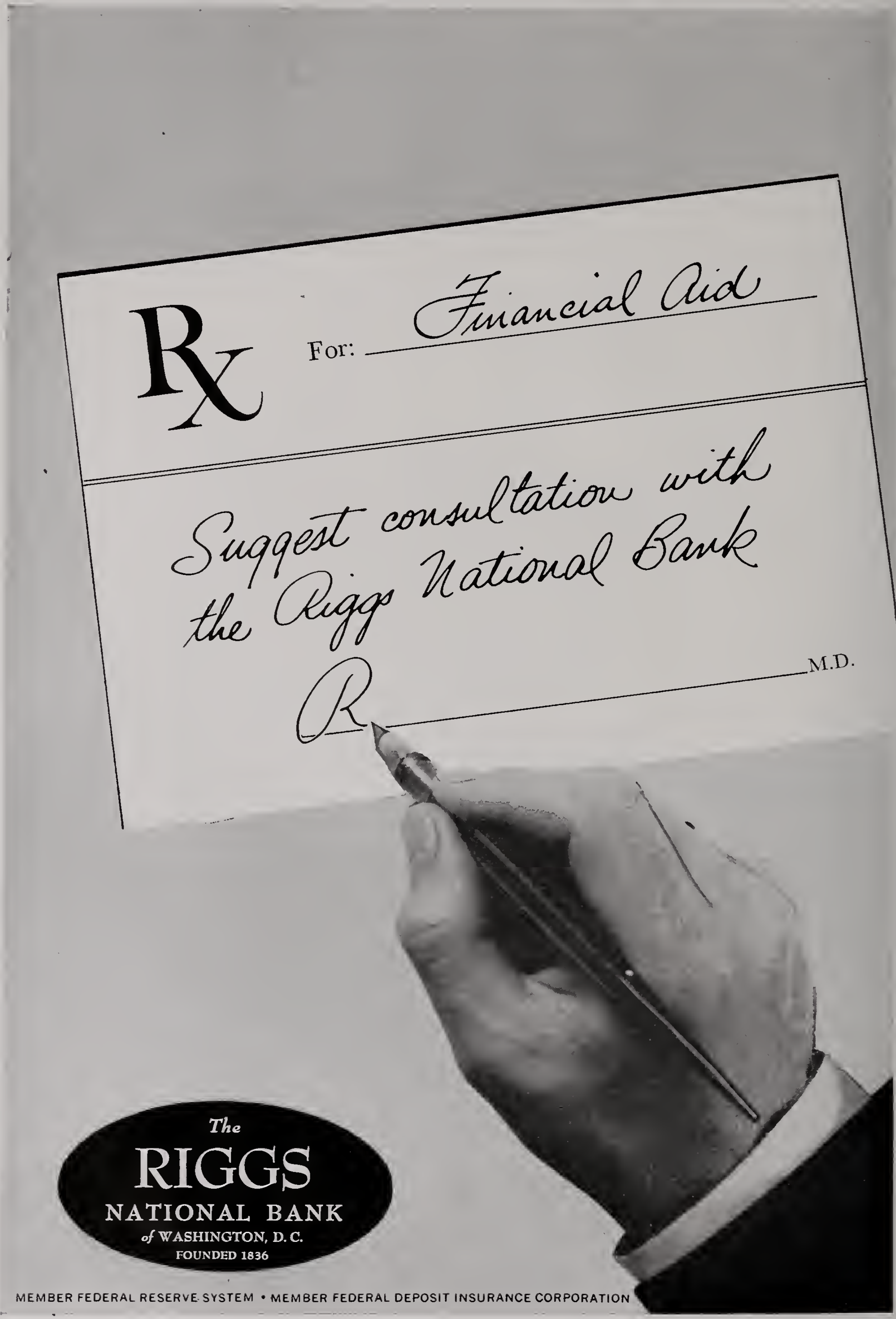

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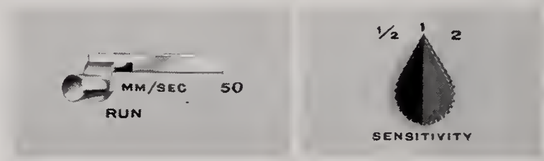

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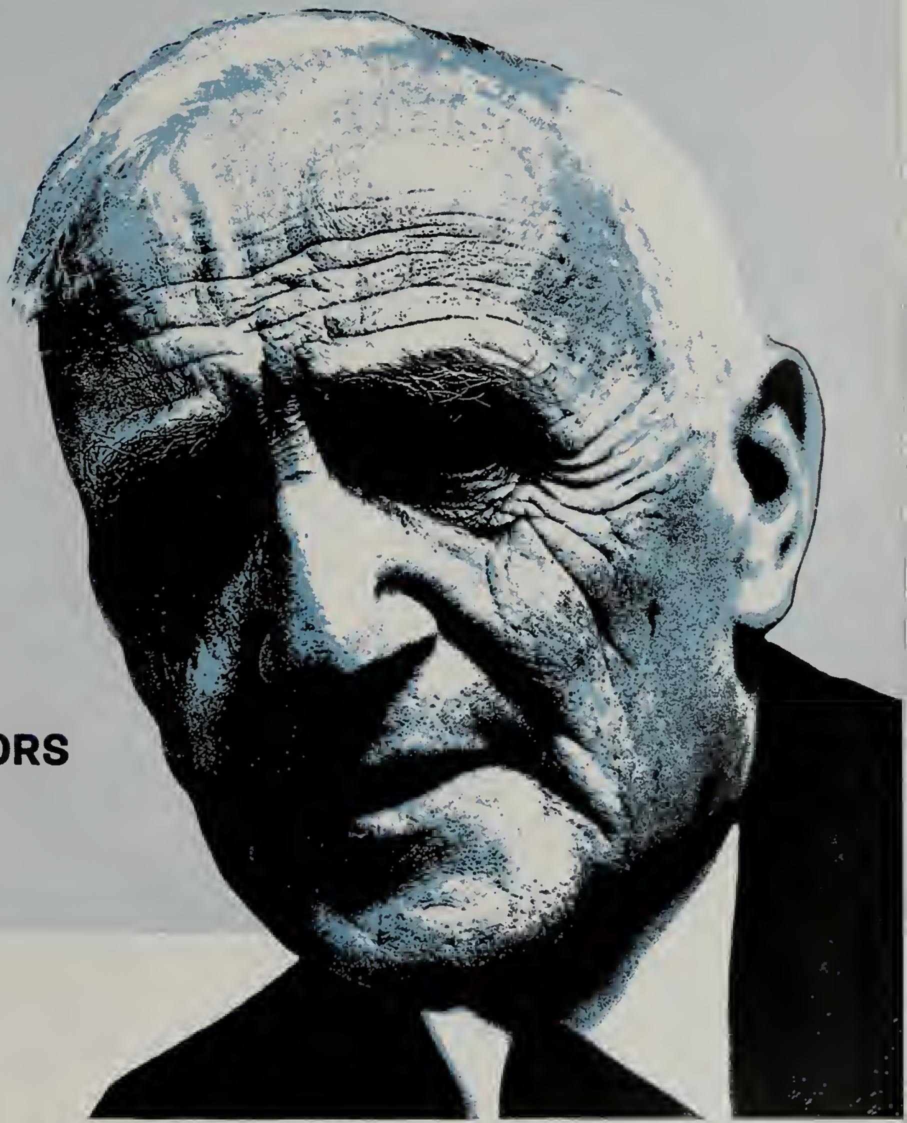

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1. Ford, R. A., and Blanchard, K. P.: J.-Lancet 78:185, 1958.

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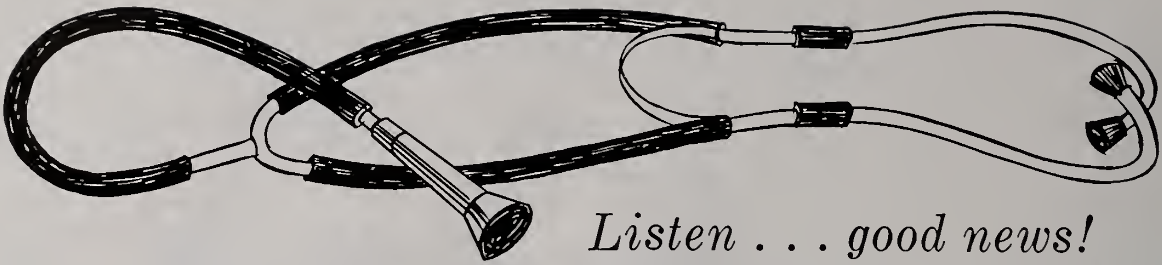

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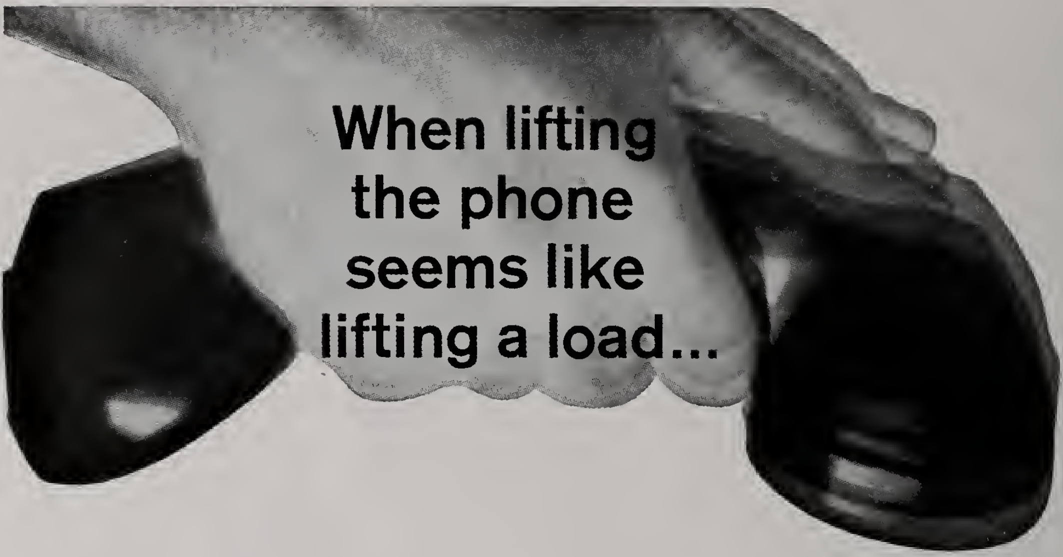

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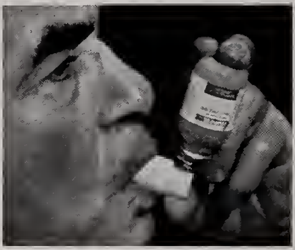
1. Reeves, J. E.: *M. Times* 90:512, May, 1962. 2. Williams, M. H., Jr.: *M. Sc.* 11: 433, March 19, 1962. 3. Peckenschneider, L. E.: *J. Kansas M. Soc.* 56:486, Sept., 1955.



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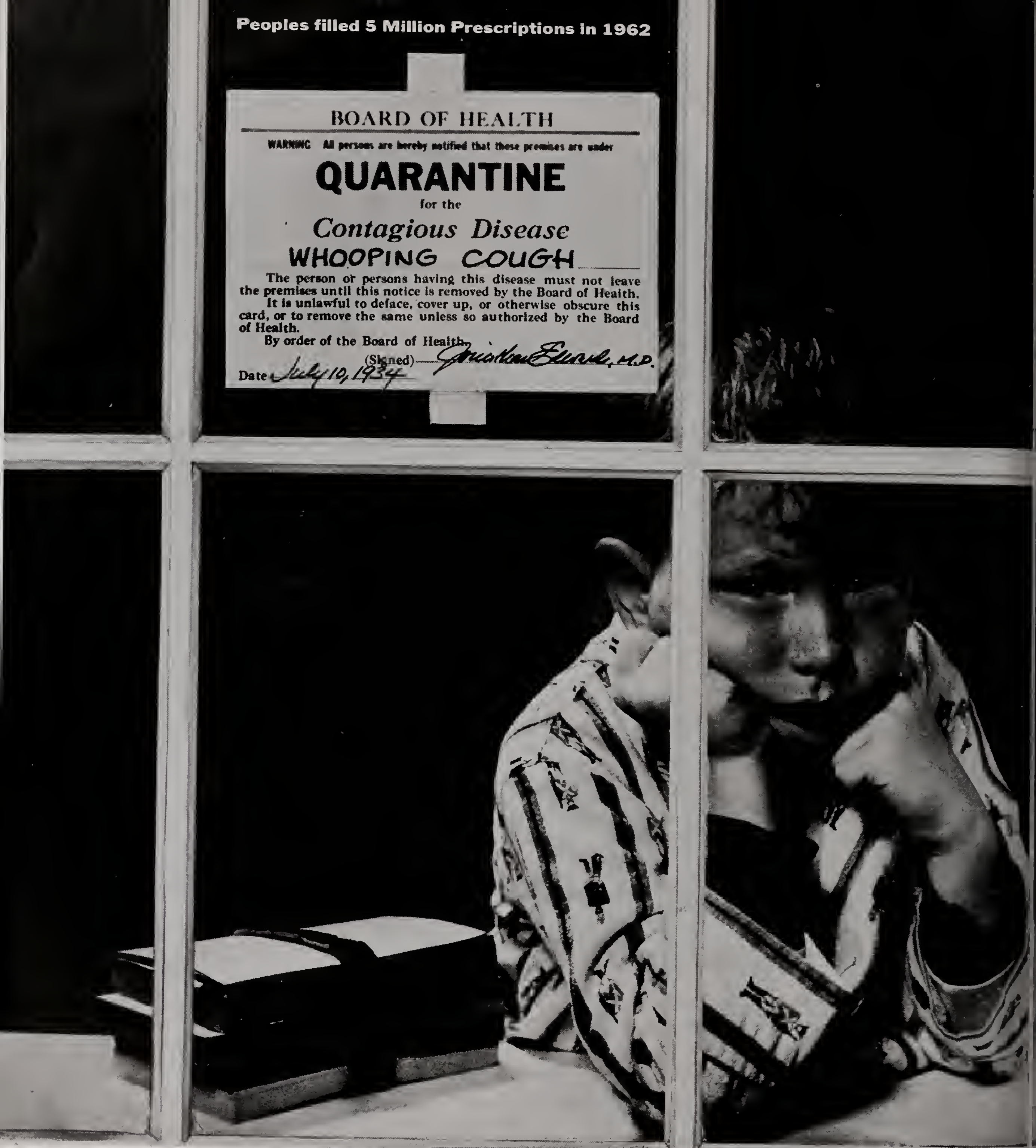

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October 21–22: 1963 Scientific Session: Conference on Unusual Forms and Aspects of Cancer in Man. Biltmore Hotel, New York. Address: Dr. Roald N. Grant, Director, Professional Education, American Cancer Society, Inc., 521 West 57th Street, New York 19, N. Y.

October 25–26: Second National Congress on Medical Quackery. Sheraton-Park Hotel, Washington. Address: Dr. F. J. L. Blasingame, Executive Vice President, American Medical Association, 535 North Dearborn Street, Chicago 10, Ill.

October 26: American College of Physicians (Maryland-District of Columbia regional). Baltimore. Address: Dr. Samuel P. Asper, Jr., Johns Hopkins Hospital, 601 North Broadway, Baltimore 5, Md.

October 27: Association of Clinical Scientists. Hotel Statler-Hilton, Washington. Address: Dr. Robert P. MacFate, Secretary, 54 Hubbard Street, Chicago 10, Ill.

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November 4–6: Association of Military Surgeons of the United States. Statler-Hilton Hotel, Washington. Address: Brig. Gen. Frank E. Wilson, Executive Director, 1500 Massachusetts Ave., N.W., Washington 5, D.C.

November 7–9: American College of Obstetricians and Gynecologists (District 4). Shoreham Hotel, Washington. Address: Dr. Lawrence L. Hester, Jr., Secretary-Treasurer, 55 Doughty Street, Charleston, S.C.

November 17–18: Southern Chapter of American College of Chest Physicians. Monteleone Hotel, New Orleans. Address: Mr. Murray Kornfeld, Executive Director, ACCP, 112 East Chestnut Street, Chicago 11, Ill.

November 18–20: Annual Scientific Assembly, The Medical Society of the District of Columbia. Statler-Hilton Hotel, Washington. Mr. George W. Cooley, Executive Director, 1718 M Street, N.W., Washington 36, D. C.

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*AMA Council on Foods and Nutrition: The Regulation of Dietary Fat, *JAMA* 181:411-423 (August 4, 1962).

**AMA Council on Foods and Nutrition: Composition of Certain Margarines, *JAMA* 179:719 (March 3, 1962).

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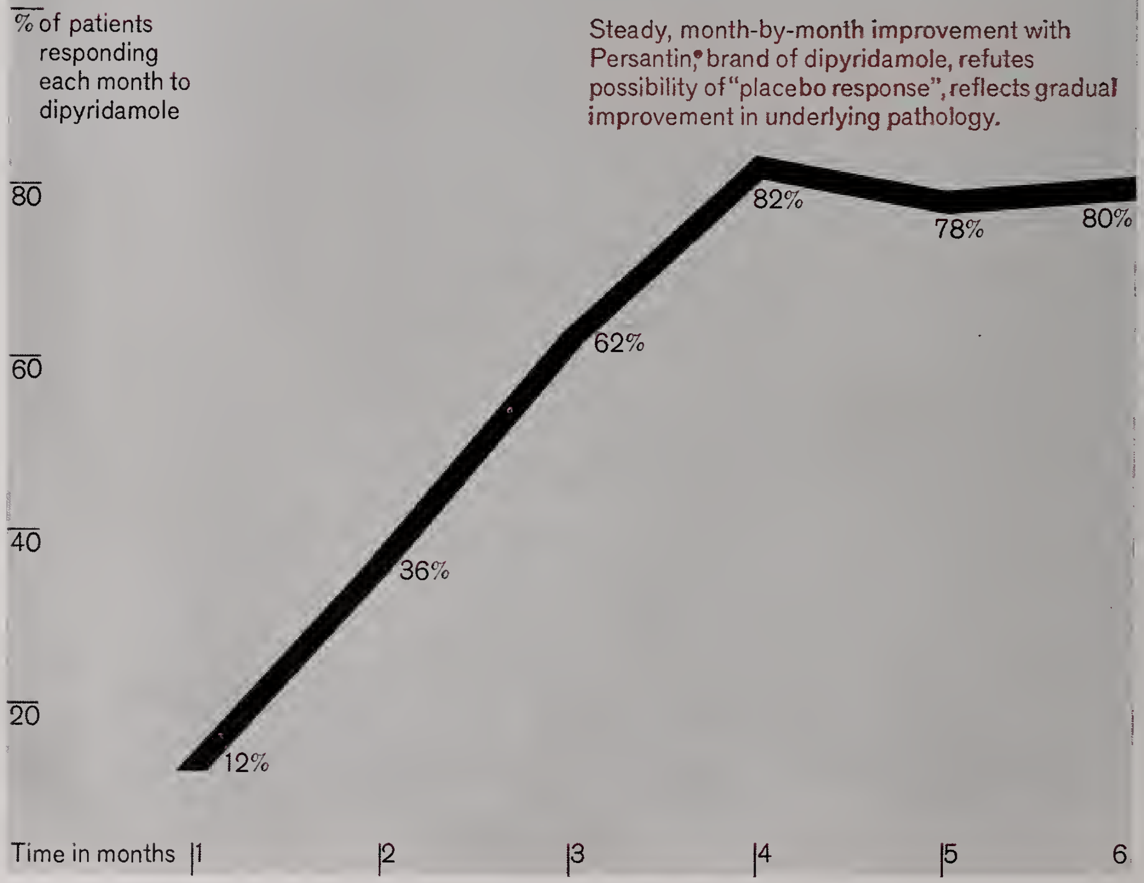

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Wirecki, M.: Dipyridamole (Persantin®): Evaluation of Long-Term Therapy in Angina Pectoris. Current Therapeutic Research 5:472, 1963.

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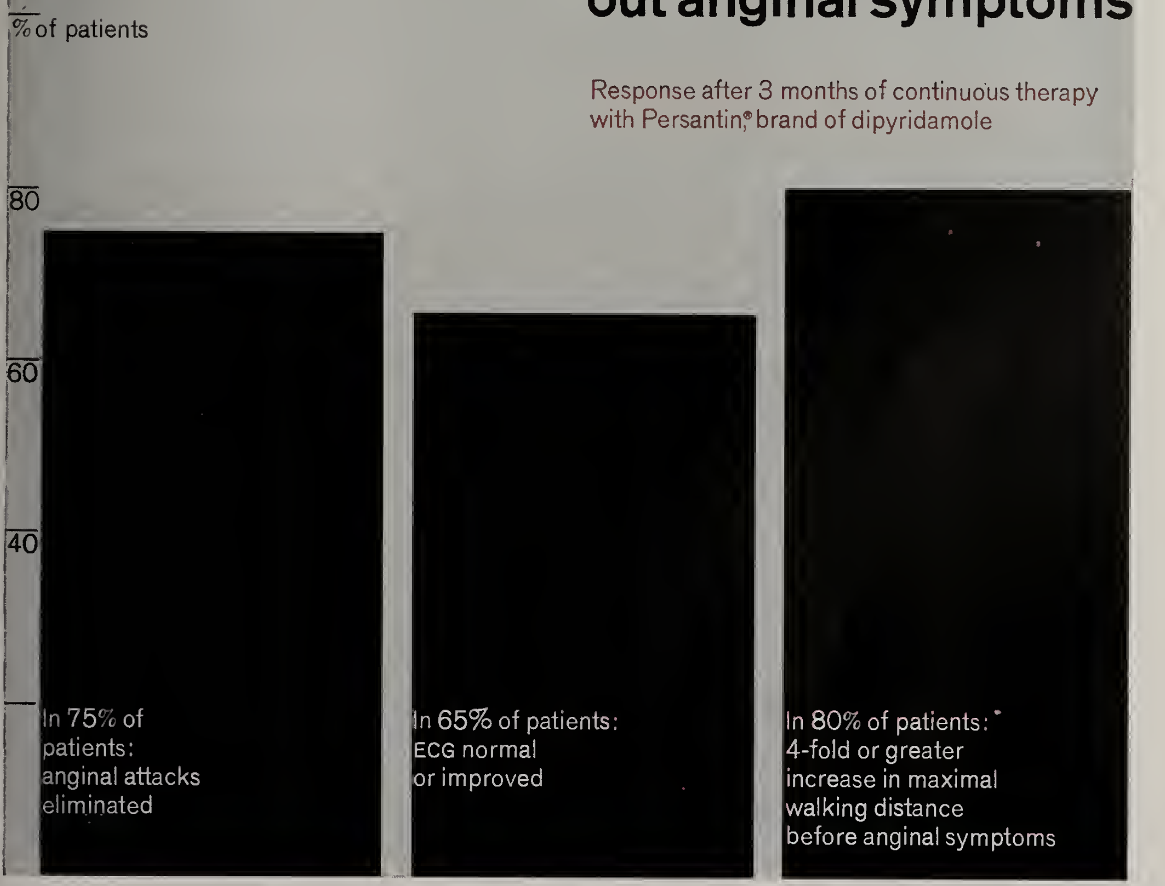

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References: 1.Kunz,W.;Schmid,W.,and Siess,M.: Arzneimittel-Forsch.12:1098,1962. 2.Siess,M.: Arzneimittel-Forsch.12:683,1962. 3.Laudahn,G.: Experientia 17:415,1961. 4.Lamprecht,W.: 27th Congress of the German Society for Circulation Research,Bad Nauheim,1961. 5.Hockerts,T.,and Bögelmann,G.: Arzneimittel-Forsch.9:47,1959. 6.Vineberg,A.M.,et al.: Canad.M.A.J.87:336,1962. 7.Chari,S.R.et al.: Presented at the International Congress of Chest Physicians,New Delhi,1963. 8.Neuhaus,G.,et al.: Presented at the Fourth World Congress of Cardiology,Mexico City,1962. 9.Asada, S.,et al.: Japanese Circ.J.27:849,1962.

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*Schwartz, I. R.:
Current Therap. Res. 3:29, Feb., 1961.

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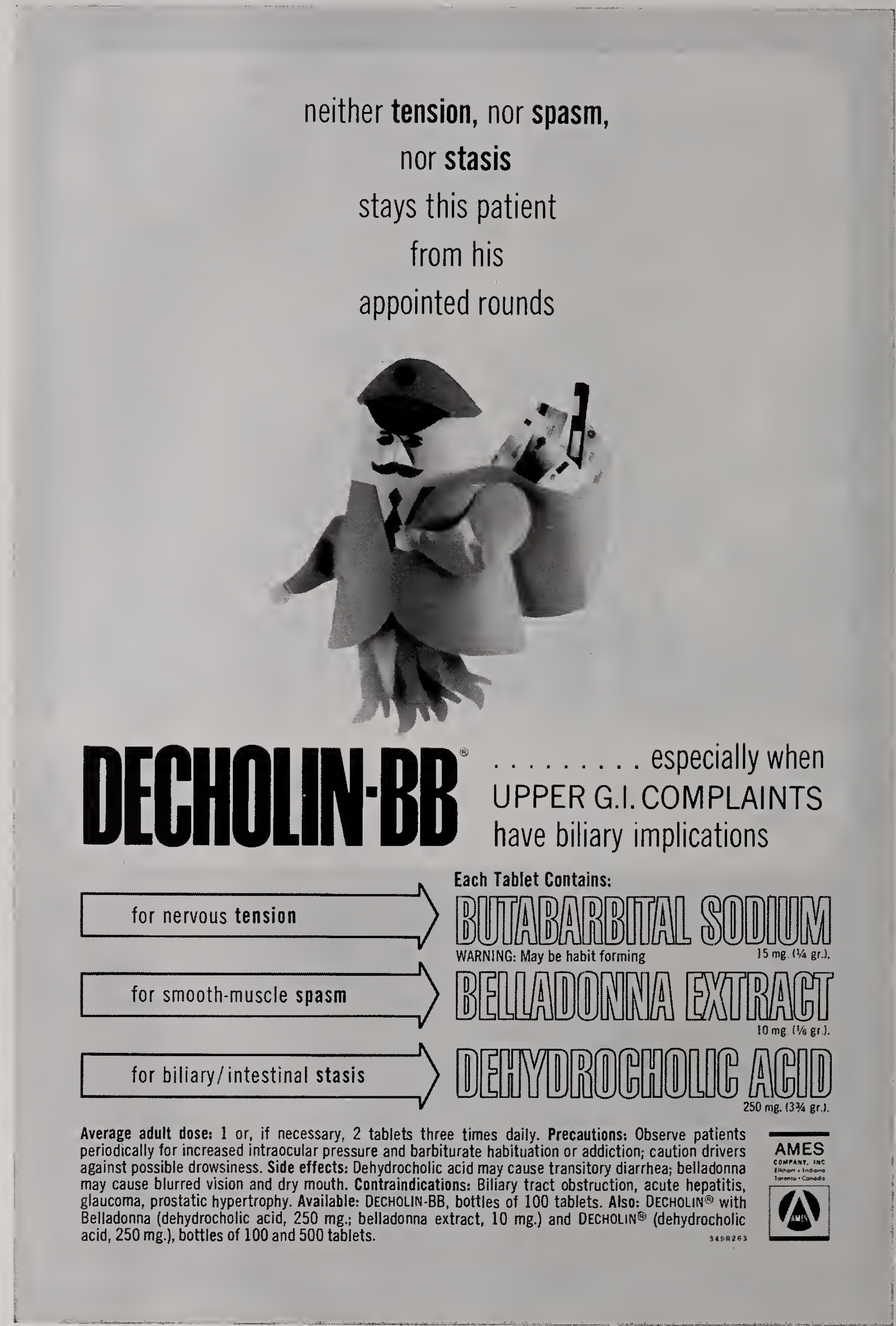

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MEDICAL ANNALS

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October 1963

VOLUME XXXII • NUMBER 10

Iron-deficiency Anemia in Negro Infants and Children in the Metropolitan Area of the District of Columbia*

MILTON S. ADAMS, M.D.†
Philadelphia

ROLAND B. SCOTT, M.D.
Professor and Head, Department of Pediatrics, Howard University College of Medicine; Chief, Pediatric Service, Freedmen's Hospital, Washington

THE PURPOSE OF THIS STUDY was to determine the incidence of iron deficiency anemia in Negro infants and children receiving care at a metropolitan hospital. Consideration was given to the dietary habits of the children and the economic status of their families.

The 160 subjects included in this study were selected at random from the inpatient and outpatient hospital services. The infants under 2 years of age were taken from the well-baby clinic. We also included hospitalized pediatric patients in various age groups who were admitted for surgical or medical treatment. The study group also included infants and children who were attending the outpatient general pediatric clinic as well as patients receiving private care from local pediatricians.

The following procedures were performed on each patient: hemoglobin, hematocrit (micromethod), red blood cell count, hematologic indices, peripheral smear, and moist sickling preparation. The level of serum iron was determined on all questionable and positive cases by the modified method of Schales. The source of subjects and results of screening are listed in table 1.

TABLE 1. Source of Subjects and Results

Subjects (Number)	Source	Male	Female	Anemic Cases
47	Pediatric Clinic	30	17	4
50	Surgical Pediatrics	35	15	0
35	Medical Pediatrics	16	19	7
28	Well-Baby Clinic	12	16	1
TOTAL: 160		93	67	12

For further analysis the subjects were divided into 7 groups according to age, as shown in table 2. Nine out of 12 (75 per cent) of the positive patients were between the ages of 5 and 24 months.

Table 3 summarizes the pertinent information on the anemic cases.

Iron-deficiency anemia is the most common anemia of childhood.[1] In the majority of cases this condition is due to inadequate nutrition. This type of anemia is quite prevalent among prematures[1, 2] and in the age range of 5 to 24 months in full-term infants. All of the positive patients were at least 5 months old, and 85 per cent were 24 months of age or less. From the total of 160 patients screened our method of random sampling produced an incidence of 7.5 per cent.

---

* This study was performed during the summer of 1962 when the senior author was serving as a research fellow at Howard University and Freedmen's Hospital, supported by the Council on Foods and Nutrition of the American Medical Association.

† Presently interning at Germantown Dispensary and Hospital, Philadelphia, Pa.

Iron-deficiency anemia is more common in growing children and in women during the child-bearing age.[3] The developing child, because of his added needs to support growth and his expanding blood volume, is quite often in a precarious state of iron balance.[3]

TABLE 2. Summary of Patients Tested by Age Groups and Sex

Age	Number Tested	Anemic (Males)	Anemic (Females)
0–6 months	26	1	1
6–12 months	24	1	3
12–24 months	11	3	0
24–36 months	13	2	0
3–5 years	29	0	1
5–10 years	40	0	0
10–15 years	17	0	0
TOTAL:	160	7	5

Very little is mentioned in the literature of the association of iron deficiency and social or economic status. In large families with limited financial resources parents often overfeed their children with excessive amounts of carbohydrate and prolonged diets of whole milk while neglecting to assure an adequate intake of meats and vegetables.[4] A sampling of 50 per cent of the entire number of patients screened revealed that only 22 per cent had total monthly incomes of $400 or more. The economic level of the anemic patients was likewise low, and the mean number of siblings was 5 or more per family. The families of 2 anemic patients contained but 1 child each, but another anemic infant had 15 siblings.

The mothers of our patients were questioned with respect to the dietary habits of their children. Less than 5 per cent of the patients screened had been breast fed. The majority of parents had started their children on some type of artifical formula at birth. Most of the anemic patients were full-term babies and weighed at least 5½ pounds at birth. Only 20 per cent of the anemic patients were prematurely born. One of the anemic patients weighed only 2½ pounds at birth and increased her birth weight 6 times within the first 5 months, thus markedly decreasing her iron stores.

The dietary pattern of the anemic patients was fairly typical. The mothers usually started the infant's feeding with a formula of canned milk, water, and syrup. Cereals were introduced when the babies were 2 to 3 months of age; in many instances, however, it was not consistently taken. Vegetables and fruits were delayed until the age of 5 or 6 months, and meat was also introduced about this time. In many instances the mothers did not give the infants green vegetables consistently because of the infant's dislike for this type of food. Eggs (yolk) were introduced variously from 2 months of age in some cases to 8 months in others. At least half of the anemic patients were consuming milk in excess of a quart per day.

In addition to poor socioeconomic status many parents were apparently ill-informed about adequate nutrition.

After a diagnosis of iron-deficiency anemia was established the parents of the child were informed of the probable etiology and the problem, including dietary measures, discussed with them. A prescription for ferrous sulfate solution was given.

TABLE 3. Summary of Essential Findings in Anemic Patients

Age (mos.)	Sex	Birth-Wt. Lb.—Oz.	Present Wt.-Lbs.	Economic Class	Nutritional Status	Siblings	RBC Sickling	Hgb. (Gm.)	Hematocrit	RBC M/cu. mm.	Smear: Hypochromia. Microcytes.	Serum Iron μg./100 ml.	Admitting Diagnosis
19	M	6—12	23	Low	Fair	3	Neg.	9.9	29.0	3.2	+	120+	URI*
9	F	7—2	18½	Low	Fair	1	Neg.	9.5	28.0	3.1	+	38	Dermatitis
21	M	5—8	26	Low	Fair	4	Neg.	9.9	30.0	3.3	+	45	URI*
24	M	6—3	26	Low	Fair	3	Neg.	11.7	33.0	3.4	+	120+	Asthma
12	M	6—4	13	Low	Poor	15	Neg.	7.1	19.0	2.9	+	38	Pneumonia
24	M	6—2	25	Low	Fair	2	Neg.	10.3	31.5	3.3	+	106	Feeding problem
48	F	5—15	37	Low	Fair	6	Neg.	6.5	20.0	3.1	+	59	Severe anemia
6	F	7—1	15	Low	Fair	6	Neg.	7.6	22.0	3.1	+	30	Pneumonia
8	M	6—11	15½	Low	Fair	8	Neg.	7.2	19.5	3.2	+	76	Gastritis
5	F	2—8½	15	Low	Fair	1	Neg.	7.8	23.0	3.1	+	117	Prickly heat
12	F	5—6	18	Low	Poor	6	Neg.	7.5	19.5	3.2	+	80	Gastritis
24	M	6—3	23	Low	Poor	6	Neg.	8.5	33.0	4.4	+	—	URI*

*Acute upper respiratory tract infection.

Ferrous sulfate and ferrous gluconate have been recommended in dosage of 1 to 2 mg./Kg of body weight per day.[4] It is interesting to note that the American physician is offered more than 150 preparations for the treatment of "hypochromic microcytic anemia." Only 5 of these are simple iron medications; all the rest are combinations of various drugs.

Oral iron was felt to be adequate in these cases since it is simple to use, safe, inexpensive, and optimumly effective in relieving iron-deficiency anemia. Stevens[4] states that the chief indication for the use of parenteral iron is probably oral intolerance to the drug. Our treated patients' parents were instructed to return with their children for blood studies in 6 to 8 weeks. The hematinic was continued in reduced dosage for 3 months after the hemoglobin concentration reached normal levels in order to replenish the depleted stores.[5]

Iron-deficiency anemia is insidious in nature. If the condition is mild or moderate there may be no notable symptoms. Some degree of weakness is usually present in severe cases. With more severe degrees of anemia a waxy pallor is apparent. One of our patients had a moderate splenomegaly in addition to the usual findings. This particular patient was admitted to the hospital with a diagnosis of bronchopneumonia. When infection is present or if the anemia is severe a mild to moderate splenomegaly and lymphadenopathy may be found.[6] Most of our patients showed no more than a pallor of the palms of the hands, soles of the feet, and the lips. In fair-skinned infants the marked pallor was more generally apparent and easier to recognize.

The peripheral smear of our anemic subjects showed the typical findings of hypochromia, microcytosis, anisocytosis ("pencil cells"), poikilocytosis, and usually minimal polychromasia. Target cells were infrequently present, and usually the lowering of hemoglobin was out of proportion to the reduction of red blood cells. Serum iron levels were below normal in the majority of cases. In the few patients with diagnostic peripheral smears and apparently normal serum iron levels the latter were thought to be due to technical error. During the screening for iron deficiency 6 instances of sickle-cell trait were revealed.

Summary

The incidence of iron deficiency anemia in 160 Negro infants taken at random was 7.5 per cent. Almost all of the anemic patients were between the expected ages of 5 and 24 months.

At the time of the study there were 27,400 Negro infants under 2 years of age in the Washington Metropolitan Area. If we apply our test findings to this large group by extrapolation, one would expect an incidence of iron-deficiency anemia in this age period of 75 cases per 1,000 infants, or 2,055 cases for the Metropolitan Area. This is thought to be a very conservative estimate.

Low economic status and inadequate knowledge about nutrition were the chief factors which contributed to the anemia in the families in this study.

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Some Current Concepts in Infectious Diseases*

Part IV. Principles of Antimicrobial Therapy and Clinical Axioms

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KNOWLEDGE OF THE PATHOGENESIS and clinical course of infectious diseases and acquisition of mature clinical judgment are requisite for proper selection and application of antimicrobial agents. The nature and locus of an infection are identified from the history, physical examination, and pertinent roentgenographic and laboratory procedures including microbiologic ones.

While laboratory data are being awaited, antimicrobial therapy usually is initiated empirically in serious infections, and accordingly modified if the patient is not doing well when the results of the awaited tests are reported. The results of microbiologic procedures utilized in the investigation of infectious diseases are no more absolute than those employed in other diseases. Interpretation of the data supplied by the microbiologist and especially their correlation to the patient at hand remain the responsibility of the clinician.

Clinical Consideration of Some Microbiologic Methods

In attempts at precise management of infectious diseases, identification of the species of organism is fundamental. Occasionally smears of infected body fluids, pus, and so forth are helpful in this regard, and serologic procedures may be of considerable diagnostic aid, but in general cultural technics and animal-inoculation studies are more reliable.

Direct examination. Examination of a direct smear of pus or an exudate stained with Gram's stain may be extremely helpful. Advantages are that pathogens may be differentiated from contaminants that may appear later on the plates, and also sometimes therapy can be started much sooner, with valuable time thereby being saved.

Examination of the urine should include direct microscopic study prior to plating quantitative cultures. A midstream specimen is collected in a sterile container; except in severe vulvovaginitis catheterization is not necessary. The fresh uncentrifuged urine is examined microscopically (Gram's stain), since contaminants are rarely seen under these circumstances when proper technic is employed.[1-4]

Of course, direct microscopic examination of other materials occasionally provides a definitive diagnosis long before the results of more involved procedures are available. The finding of *Cryptococcus neoformans*[5] in India ink preparations of spinal fluid, the identification of meningococci in spinal fluid or from cutaneous lesions, and the recognition of viral hepatitis on liver biopsy are examples in which initiation of more pertinent therapy can be expedited and also more hazardous investigative and therapeutic measures are sometimes avoided. At times diagnosis may virtually depend upon the adequacy of microscopic examination, as in the recognition of *Amoeba histolytica* in feces and malarial parasites in blood smears and upon darkfield examination of genital lesions for *Treponema pallidum.*

Preparation of cultures. In the preparation of cultures the specimen should be plated as soon as possible; drying or chilling can be fatal to hoped-for microbial growth. Two common errors in preparation of plates consist of too heavy or too light inoculation. One inoculates the plates to identify individual colonies of bacteria, and excess growth may make this impossible.

Serologic procedures. Various serologic procedures often provide valuable ancillary data, but require cautious interpretation. As a generalization, such procedures supply evidence of past or present infection by demonstrating the presence of antibodies in serum or other body fluids. The isolated observation that serum contains antibody reacting with a certain antigen merely indicates previous contact with that antigen or a related substance; therefore, precise clinical interpretation of serologic tests usually depends on the results of serial determinations. If the titer of antibody proves to be rising, it is likely that the subject has had recent or is having current contact with the antigen. The results of serologic tests should always be interpreted in the light of previous immunizations and illnesses. It is well, in cases of illness of obscure origin that conceivably could be infectious, to obtain sterile specimens of serum to be preserved in the frozen state so that they can be studied and compared with any specimens of later date.

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Serum levels of antimicrobial agents. With the passage of time clinicians have relied less and less on determination of the concentration of antimicrobial agents in serum. It has been learned that there is only rough correlation between such concentrations and clinical results. As an example, phenethicillin gives a higher serum concentration than does an equal dose of penicillin V, yet the serum bactericidal effects are equal.[6] Also, the toxicity of many agents has been reduced by replacement with less toxic analogues, and knowledge of dosage has evolved so that excesses in serum are less feared or less likely. However, with the more toxic agents, especially those newly introduced, and in renal dysfunction, determination of the serum concentration continues to have occasional application. Also as aforementioned, with almost every drug designed for oral administration there is a small group of patients who absorb poorly and who fail to demonstrate optimal serum concentration.[7, 8, 9] Rarely when a patient fails to respond, determination of the serum concentration of the drug may reveal such a defect.

Inhibitory and bactericidal tests. Determination of the minimal inhibitory and bactericidal concentrations of drugs on the in vitro growth of bacteria sometimes can provide valuable help to the clinician. Such "sensitivity" (inhibition, susceptibility) tests are more reliable when performed by serial-tube-dilution or agar-dilution methods than when done by so-called disk methods. The disk methods, widely employed, are considerably less reliable.

Although determinations of the susceptibility of microörganisms to various antimicrobial agents often are helpful in the proper management of certain infections, they are unnecessary in many cases. Also, the results of such tests correlate only roughly with clinical response to the agents employed. A drug eradicating an organism in the laboratory may be inappropriate to cure of the infection at hand; as an example, a bacteriostatic agent may seem to be indicated on the basis of in vitro inhibition tests, but one may know empirically as in cases of bacterial endocarditis that, unless a bactericidal effect is obtained, treatment will be ineffective.

Conversely, drugs that are less satisfactory on in vitro testing may be capable of clinical cure. As an example, in treating infections due to Proteus organisms, we noted that, despite in vitro resistance to tetracycline and streptomycin, eradication of the infection followed use of these agents.[10, 11] In addition, in many serious infections, use of antimicrobial agents must be initiated empirically before results of in vitro inhibition tests are available.

In infections due to certain bacteria, in vitro inhibition tests are not necessary because certain antimicrobial agents are always found to be active against certain microörganisms. For example, all strains of beta-hemolytic streptococci (group A) are sensitive to penicillin, and virtually all strains of Pseudomonas are sensitive to polymyxin B.[11, 12, 13] On the other hand, with species such as *Staphylococcus aureus* the finding of a successful regimen may depend largely on such tests.

A brief description of 3 microbiologic procedures designed to demonstrate the inhibiting or bactericidal effects of antimicrobial agents follows:

1. Minimal Inhibiting Concentrations (MIC, In Vitro Inhibition or Susceptibility Test). Susceptibility of bacteria to an antimicrobial agent may be determined by a serial 2-fold plate-dilution technique with the use of pure cultures of organisms. The antimicrobial agent in varying concentrations is incorporated in the culture medium and a specified number of organisms is inoculated thereon. After incubation for 18 hours the plates are observed for the presence or absence of bacterial growth. The lowest concentration of antibiotics capable of inhibiting growth is recorded as the minimal inhibiting concentration, or, as it is usually expressed in the vernacular, the "sensitivity."

2. Minimal Bactericidal Concentration (MBC, Bactericidal End Point). The ability of an antimicrobial agent to kill strains of bacteria may be determined by diluting the drug in pooled human serum and inoculating a specified number of organisms into tubes containing progressive dilutions of the drug. After incubation for 24 hours aliquots of each dilution are transferred to broth and further incubated. The highest dilution of the antimicrobial agent capable of killing all of the organisms as demonstrated by no growth in broth is recorded as the minimal bactericidal concentration.

3. Serum Bactericidal Test.[9, 10, 14] This procedure represents an attempt to determine the ability of the patient's serum containing 1 or more antibiotics to eradicate a strain of bacteria. The bactericidal activity of a patient's serum containing 1 or more of the antimicrobial agents he currently is receiving can be determined against the organism responsible for his infection. Serial 1:1 dilutions of the patient's serum in pooled human serum are seeded with a standard inoculum of the organism. The tubes are then incubated in an atmosphere containing 5 per cent carbon dioxide for 18 hours at 37°C. Inhibition is said to have occurred at the concentration of antibiotic in the tube with the least amount of drug that has suppressed bacterial growth. From the tube in which inhibition has occurred, 0.05 ml. is subcultured in 10 ml. of broth and the subculture incubated. The absence of growth on the subculture is interpreted as being indicative of a "bactericidal effect" by the antibiotic in that dilution. The test, despite the terminology employed, yields only "laboratory information." While of some aid to the clinician, it does not allow one to predict failure or success in the management of clinical problems.

Selection of Antimicrobial Agents

The fundamental requirements in the selection of antimicrobial agents perhaps can be synopsized as follows: (1) establishment of the necessity for use of an antimicrobial agent, (2) choosing of an adequate regimen, and (3) administration of the drug or drugs in adequate dosage for a sufficient time.

The situation at hand may influence selection of the drug to be used; a patient who is vomiting is not a candidate for penicillin V. On the other hand, one would not recommend vancomycin, which must be given intravenously, for an upper respiratory infection. Previous allergic reactions or current intolerance of an agent may disqualify it for use.

When resistant organisms are encountered the intrinsic severity of the infection is the keystone to deciding whether the risk associated with use of more toxic antimicrobial agents is justified.

Principles to be borne in mind in the management of necrotic and pus-forming infections include these: (1) Scrupulous care is required to prevent implantation of additional bacterial strains; (2) accumulation of pus in tissue under tension requires that an exit be provided; (3) when a foreign body is embedded in infected tissue, healing will not occur until the object is removed; and (4) in a walled-off process, removal of the rigid wall or of the entire focus may be required.[15-21]

When so-called bacteriostatic or suppressive drugs are used, negative follow-up cultures should not cause relaxation of scrutiny, since the infection may recur shortly. Although the terms "bacteriostatic" and "bactericidal" may not be ideal, one needs to be familiar with the concepts that they identify. In vitro, with concentrations of drugs unattainable in the body, agents may produce irreversible destruction of bacterial viability or, in other words, a "killing effect" on bacteria. However, we employ the term "bactericidal" to designate drugs that may do so in vivo, that is to say, when these agents are administered in concentrations that can be tolerated by the host. The bactericidal agents include penicillin, streptomycin, bacitracin, neomycin, polymyxin B, kanamycin, vancomycin, and possibly ristocetin.

Bacteriostatic agents are those whose concentrations in the body are insufficient to kill bacteria, and these produce a reversible inhibition of bacteria proliferation. Bacteriostatic agents may be ineffective when used alone, except in acute, uncomplicated situations. The bacteriostatic agents include the tetracyclines, chloramphenicol, erythromycin, novobiocin, triacetyloleandomycin, sulfonamides and nitrofurantoin. However, when a combination of a bactericidal and a bacteriostatic agent is used, it may be bactericidal; this possibility should be determined in the individual infection and preferably by so-called serum bactericidal tests.

Theoretically at least, optimal therapy with bacteriostatic agents would appear to require continuous maintenance of adequate concentrations in the body more so than treatment with bactericidal drugs, since, after limited exposure to a bacteriostatic agent, bacterial growth is more likely to be resumed. Also, it should be recalled that some agents which ordinarily are bactericidal may be only bacteriostatic when administered in less than optimal concentration.

With all due regard for the preceding considerations, whenever one encounters a situation demanding antimicrobial therapy it is well to observe the concept of Erlich in this regard (*frapper fort et frapper vite*), and to administer the drug or drugs selected in maximal dosage and with minimal delay.

Some Abuses and Limitations of Antimicrobial Therapy

From the total consumption of the antimicrobial agents and the known incidence of infectious diseases susceptible to their action it is evident that these drugs are often employed when they are not required. It is also clinical experience that the drugs, even when indicated, often produce less than an optimal response because they are not administered properly.

Probably the most frequent abuse of antimicrobial therapy arises from the treatment of patients having fever of undetermined origin. It is common experience that premature administration of antimicrobial agents to such patients may eradicate or prolong the ferreting out of microbiologic evidence of an infection causing the fever or that more adequate investigation may reveal a noninfectious cause of the fever.

Reliance on antimicrobial therapy to the exclusion of surgical intervention appears to have been decreasing in recent years, except in those instances in which the surgeon initially may be loath to accept the likelihood of a postoperative localized area of infection as the cause of the patient's fever.

Failure to recognize an allergic reaction, particularly "drug fever," or to detect the onset of bacterial resistance or superinfection with continuation of treatment with the offending antimicrobial agent also appears to be of gradually decreasing occurrence.

Therapeutic failures in infections may depend on (1) lack of clear indications for institution of such therapy, (2) poor selection of an agent or agents in the individual case, (3) futile attempts at prophylaxis, (4) lack of appreciation of the necessity for surgical drainage or removal of necrotic nidi, (5) lack of realization that other investigative and therapeutic procedures are indicated if there is poor response to an appropriate antibacterial regimen, (6) premature discontinuation of therapy, (7) inadequate observation of the patient after apparent control of the infection, (8) superinfection, reinfection or metastatic infection, (9) toxic or allergic reactions, and (10) underlying disease that may make recovery impossible.

Clinical Axioms

1. Generally speaking, infections previously responding to the naturally occurring penicillins continue to respond, except those due to certain staphylococci. Of the naturally occurring penicillins, penicillin G, penicillin O and penicillin V have been produced commercially.

2. The naturally occurring penicillins currently are most commonly employed against pneumococcal, gonococcal, streptococcal, meningococcal and syphilitic infections. Penicillin G is preferred in meningococcal and syphilitic infections.

3. Infections due to numerous other organisms such as anthrax bacilli, *Actinomyces israeli*, the clostridia of gas gangrene, Borrelia, *Spirillum minus*, *Streptobacillus moniliformis*, *Pasteurella multocida*, fusospirochetal (Vincent's) organisms, *Listeria monocytogenes*, and *Erysipelothrix insidiosa* have been treated successfully with the naturally occurring penicillins.

4. Aqueous crystalline penicillin G is used when rapid effect or high serum concentrations of the drug are sought. It may be given intramuscularly (for example, 1,000,000 units every 2 hours in meningococcal meningitis) or by continuous intravenous drip (for example, 20,000,000 or more units daily) plus streptomycin in enterococcal endocarditis.

5. Procaine penicillin G is used when a longer-acting preparation than aqueous crystalline penicillin G is desired. For example, in pneumococcal pneumonia it may be given intramuscularly once or twice daily in amounts of 300,000 to 1,200,000 units.

6. Benzathine penicillin G, in amounts of 1,200,000 units given intramuscularly, is used in the definitive management of certain infections such as streptococcal sore throat and for the prophylaxis of conditions like rheumatic fever in which reinfection by beta-hemolytic streptococci is undesirable. The drug may persist in the body up to 4 weeks.

7. The alternate agent of choice in managing streptococcal pharyngitis in patients having penicillin allergy is erythromycin.

8. Penicillin O has been administered intramuscularly and intravenously in the doses recommended for aqueous crystalline penicillin G. It has been recommended when penicillin is to be given to someone allergic to penicillin G, but this does not ensure against untoward reactions.

9. Two hundred thousand units (125 mg.) of penicillin V given orally at 4-hour intervals is a satisfactory dose in the treatment of minor infections. In more severely ill patients 1,000,000 or more units can be given at the same rate.

10. The semisynthetic phenethicillin, like penicillin V, is resistant to gastric acid. However, unlike penicillin V, its absorption from the gastrointestinal tract is reduced when it is taken with or shortly after food.

11. Although the dosage and indications for use of phenethicillin are similar to those for penicillin V, its use entails the added inconvenience of arranging a treatment schedule that assures that

the drug will be given half an hour before or 2 hours after the ingestion of food.

12. Administration of the semisynthetic phenethicillin may provide higher blood levels, but its ability to kill susceptible organisms, as indicated by the so-called serum bactericidal test, is not comparatively enhanced when compared with that of penicillin V. Therefore, in infections in which oral administration of penicillin is employed one may use penicillin V and the newer semisynthetic penicillin interchangeably.

13. Since penicillin produces lasting remissions in 80 to 90 per cent of pelvic, abdominal and cervicofacial forms of actinomycosis and in about 50 per cent of cases of pulmonary actinomycosis, amphotericin B is not required in the treatment of the disease. The tetracyclines may be even more effective than penicillin.

14. Penicillin remains the drug of choice in all stages and for all types of syphilis and gonorrhea; in patients allergic to penicillin a tetracycline or erythromycin may be given.

15. A regimen of 1,000,000 units of procaine penicillin given twice weekly for 6 injections, or administration of 2,400,000 units of benzathine penicillin G given twice at weekly intervals suffices for most cases of early syphilis. In late syphilis a total of 7,200,000 units of penicillin is recommended.

16. A single intramuscular injection of 600,000 units of procaine penicillin G cures more than 95 per cent of male patients with acute gonorrhea; a second injection 48 hours later cures the remainder. Therapeutic response in the female is harder to evaluate, but a similar regimen appears to give a bacteriologic cure rate as high as 98 per cent.

17. *Pasteurella multocida* may cause various infections, such as cellulitis, osteomyelitis, bacteremia, meningitis and pneumonitis, which appear to reflect contact with animals. In contrast to other Pasteurella infections, which are best treated with streptomycin, penicillin is the drug of choice, but this organism is also susceptible to tetracycline.

18. Erysipeloid is due to a gram-positive microaerophilic rod, *Erysipelothrix insidiosa.* Infection generally occurs after an abrasion, and edema, a purplish-red color, and sharp definition are characteristic. Bacteremia, endocarditis, and suppurative arthritis are rare complications. The handling of fish, meat, poultry and their products may be the means of infection in man. Penicillin is curative.

19. Tissues of ischemic limbs usually contain detectable amounts of systemically administered penicillin, tetracycline and erythromycin; when sensitive organisms are present in infected ischemic lesions, administration of these agents may result in salvage of a limb.

20. Infections of closed membranous cavities due to penicillin-sensitive organisms may be treated with aspiration and instillation of 10,000 to 20,000 units of aqueous crystalline penicillin G in 5 to 10 ml. of physiologic saline solution, in addition to systemic administration of penicillin.

21. Aqueous crystalline penicillin G may be administered by nebulization, using a standard glass nebulizer operated by compressed air. As an example, in the treatment of bronchiectasis 2 ml. of the preparation containing 50,000 units per ml. is placed in the nebulizer and inhaled 3 or 4 times a day.

22. The use of probenecid (Benemid®) may increase the content of penicillin in the blood, especially if the original content is low, but probenecid also may provoke gastrointestinal irritation. Also, use of probenecid may cause chills, fever and a rash, as well as an anaphylactoid reaction which may be confused with an untoward effect of penicillin. Furthermore, probenecid can cause anemia, so that if it is used in an infection like subacute bacterial endocarditis it can lead to confusion.

23. Tularemia is one of the few diseases in which streptomycin seemingly can be employed alone with excellent results.

24. Because of neomycin's toxicity on systemic administration it is reserved principally for (1) topical application and (2) oral administration in preparation of the colon for operation, in attempts to promote intestinal antisepsis (for example, staphylococcal enterocolitis), and in certain cases of hepatic coma.

25. Although kanamycin is utilized chiefly because it is active against staphylococci, in certain instances it is employed in infections due to coli-aerogenes organisms. It is ineffective against streptococci, pneumococci, pseudomonades, and many strains of Proteus.

26. Introduction of tetracycline hydrochloride largely supplanted use of the prototypes, oxytetracycline and chlortetracycline, but the 3 agents probably can be considered interchangeable for clinical use. Demethylchlortetracycline currently has less exact application because it more often induces phototoxicity to sunlight, and it is questioned whether it produces significantly higher serum levels than does treatment with tetracycline hydrochloride.

27. Although the compounding of tetracycline

with such substances as phosphate, citric acid, or glucosamine has been claimed to increase serum concentrations of the agent, there is no irrefutable therapeutic advantage over the use of tetracycline when employing such preparations.

28. Although penicillin is the drug of choice in treponemal, neisserian, and pneumococcal infections, the tetracyclines are active, and have application in patients allergic to penicillin.

29. The shigelloses, unlike the salmonelloses, almost always are purely intraluminal enteric infections, and hence susceptible to management with drugs not absorbed on oral administration (neomycin, polymyxin B). However, about 50 cases of Shigella bacteremia have been documented to date. In such patients, antimicrobial agents with systemic effects such as tetracycline and streptomycin are required.

30. For psittacosis a tetracycline is given for at least 10 days after control of fever to minimize relapse.

31. Chloramphenicol remains the agent of choice against typhoid fever, is employed in certain staphylococcal infections, sometimes is used in infections due to gram-negative bacteria of enteric origin resistant to other agents, and may have special application in cases of rapidly progressive meningitis due to *H. influenzae.*

32. Erythromycin is of use in patients who are allergic to penicillin and who have nonendocardial infections susceptible to erythromycin on in vitro testing. Usually it is bacteriostatic in the dose commonly used, and its efficacy may be enhanced by employing it in combination with bactericidal agents such as bacitracin.

33. Erythromycin has some effect against Haemophilus bacilli, and occasionally one can avoid use of more toxic agents by the use of erythromycin in infections, such as pharyngitis, due to these organisms.

34. Polymyxin B should be reserved for infections not responding to other agents. It is active against strains of the coli-aerogenes, Shigella and Salmonella groups, but is used mainly in serious infections, such as bacteremia, caused by Pseudomonas.

35. To minimize pain at the site of intramuscular injection one may utilize 1 to 2 per cent solution of procaine hydrochloride in making dilutions of polymyxin B.

36. Colistin, like polymyxin B, is effective against strains of *E. coli*, Haemophilus, Klebsiella and Shigella but is employed especially against Pseudomonas. Proteus, Neisseria, and gram-positive organisms generally are resistant to the action of the drug.

37. Colistin is less potent than polymyxin B, when compared milligram for milligram but may have a lesser number of side-effects, and for this reason some investigators believe it may partially replace use of the latter agent in clinical practice. Resistant strains may be obtained after serial passage in vitro and in animals, and examples of reciprocal cross resistance with polymyxin B are frequent.

38. Bacitracin, as an effective agent against local infections due to gram-positive cocci, is given by intrapleural, intra-articular, intrathecal, and intraventricular injection. Also, it is used in the form of an aerosol mist in pulmonary diseases, and by the oral route in attempts at intestinal antisepsis.

39. Paromomycin is administered by the oral route, which may have application in the management of certain cases of shigellosis, intestinal salmonellosis, enteric amebic infections, in preoperative suppression of the intestinal flora, and in the management of hepatic coma.

40. Cycloserine has been used in conjunction with other drugs such as isoniazid and streptomycin in the treatment of selected patients with tuberculosis. It has also been recommended in the management of certain infections of the urinary tract due to coli-aerogenes, Pseudomonas, and Proteus. Side-effects are most likely to occur following administration of 1 Gm. or more of cycloserine daily, particularly when the individual dose exceeds 250 mg.

41. The sulfonamides having systemic effect are used most commonly in (1) certain mild infections of the urinary tract, (2) nocardiosis without involvement of the central nervous system, (3) meningitis (meningococcal, in which either sulfonamides or penicillin is used, and pneumococcal, in which both sulfonamides and penicillin are used), (4) toxoplasmosis, in which sulfonamides in conjunction with pyrimethamine have been used, (5) certain infections due to *Mima polymorpha*, and (6) chancroid, since sulfonamide therapy, unlike tetracycline therapy, does not mask conjoint syphilis.

42. Perhaps two-thirds of mild uncomplicated infections of the urinary tract due to coli-aerogenes organisms subside with the use of nitrofurantoin (Furadantin®), but up to 15 per cent may relapse within the first month after cessation of treatment. Nitrofurantoin is not so effective in urinary infections due to Proteus and Pseudomonas.

43. Amphotericin B is effective against crypto-

coccosis. Use of this agent should be considered in disseminated or chronic cavitary histoplasmosis and coccidioidomycosis, nocardiosis involving the central nervous system, sporotrichosis, and other mycotic infections in which less toxic antimicrobial agents are ineffective.

44. It is not known whether intrathecal or intraventricular administration of amphotericin B, in addition to its intravenous administration, is necessary for mycotic meningitis. Amphotericin B has been given intra-articularly, intrapleurally and as an aerosol; applied to cutaneous lesions; injected directly into subcutaneous tumefactions and areas of osteomyelitis; and administered orally for intestinal mycotic involvement.

45. Amphotericin B may be curative in Candida endocarditis complicating cardiac operations. However, since the presence of foreign bodies (sutures, prostheses) may be implicated in the genesis of the lesion, cardiotomy with excision of vegetations and repair of any defect also may be required.

46. There are 4 systemic mycoses in which the use of amphotericin B is not mandatory. They and the initial drugs of choice are (a) actinomycosis (penicillin or tetracycline), (b) nocardiosis without involvement of the central nervous system (sulfonamides), (c) South American blastomycosis (sulfonamides), and (d) North American blastomycosis (stilbamidine or hydroxystilbamidine).

47. It is doubtful whether increase in yeasts in the intestines is related to symptoms in many cases, but oral administration of nystatin in an attempt to reduce the number of these organisms in patients with diabetes mellitus, in those who are debilitated, and in premature infants may be acceptable. There is no indication that nystatin need be employed in the average patient receiving a tetracycline. The usual oral dose of nystatin is 150 mg. (500,000 units) 3 times daily. Oral and topical forms of nystatin may be used adjunctively in the management of certain cases of oral, vaginal, or cutaneous moniliasis if autoreinfection from the intestinal tract seems likely.

48. Use of nystatin vaginal tablets in pregnant patients having monilial vaginitis may reduce the possibility of thrush in the newborn.

49. Griseofulvin is supplied in 250 mg. tablets, and the usual dose is 3 tablets daily. Therapy should be continued at least 2 weeks after clinical signs of infection have abated and laboratory tests are negative for fungi. Infections that may respond to griseofulvin therapy include tinea capitis, barbae, cruris, corporis and pedis, as well as onychomycosis due to species of Trichophyton, Epidermophyton, and Microsporum. Results in the management of tinea pedis are most likely to be less than desirable.

50. The length of griseofulvin therapy in general depends upon the site of involvement and severity of the infection. The usual length in tinea corporis and cruris is 2 to 4 weeks; in tinea capitis and barbae, 4 to 6 weeks may be required; and tinea pedis may take 3 to 6 weeks or longer to respond. Onychomycosis commonly demands 4 to 12 months or more of treatment. Clipping of the hair and nails may help remove any remaining viable fungi. Surgical removal of the nails with simultaneous administration of griseofulvin may shorten the period of therapy for onychomycosis.

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A Psychiatric Referral System for Physicians

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There are approximately 465 psychiatrists in the Washington Metropolitan Area, an area containing a population of over 2,000,000 residents.* The proportion of psychiatrists to the population is consequently high—1 to every 4,314 persons. Yet physicians in the private practice of medicine are heard to say that they cannot get a psychiatrist for a patient when they need one, or at least not within a reasonable time and not without making numerous telephone calls. This is especially true, they say, when they have an emergency.

Frequently the doctor who has spent time in persuading his patient to accept psychiatric consultation feels that the appointment cannot be delayed; moreover, he often feels the need for on-the-spot assistance, particularly if the patient is showing bizarre, harmful, or perplexing symptoms.

Paradoxically, there is an increasing number of psychiatrists in the Metropolitan Area who wish to respond to the needs of their medical colleagues but do not know where the needs are or with whom. How, then, are the psychiatrist and the physician going to communicate with each other their mutual needs? One solution would be through a psychiatric referral system which enables the private-practice physician to obtain the services of a qualified, Board-eligible psychiatrist simply by picking up his telephone and dialing the number at a central switchboard.

This referral system is not to be confused with the emergency call system operated by the Adult Mental Health Clinic of the District of Columbia Bureau of Mental Health. The D. C. plan provides for a panel of psychiatrists who make home visits on a contract basis (paid by the Bureau of Mental Health) to low-income patients in emergencies. Services include examination of the patient and counseling of patient and relatives. The psychiatrist may not treat the patient, but he can suggest referral to a suitable physician, clinic, or other agency for care. Each panel member is permitted only 1 call per patient, but a visit by a second psychiatrist is allowed if the first one certifies the patient for commitment. Calls to the Clinic for psychiatrists are screened by an experienced psychiatric social worker before being relayed to the panel in rotation. Calls for service are received and go out only during regular business hours, 8:15 to 4:45, Monday through Friday.

The psychiatric referral system described on these pages is more than "a 9-to-5" auxiliary clinic offering routine outpatient services. The system would increase services to physicians and patients by providing a central board which physicians could call at any time, not only for psychiatric consultation but also to make a referral or to find out which psychiatrists visit hospitals, make home calls, or conduct specialized treatment programs. It would also provide the physician with an equal or improved version of services for middle- and upper-income self-paying patients that the District of Columbia system now provides on a more limited scale for indigents.

The central switchboard would contain a revolving file or roster of names of psychiatrists who had been surveyed for their willingness to participate in the system. Any psychiatrist could be put in the "active" file whenever he notified the "board" that he had some open hours to fill. He would also notify the board of the number and types of patients he could take. Whenever all his open hours were filled, he would again notify the board and his name would be put in the "inactive" file or the back of the revolving file until he was free again to take referrals. It would be the physician's responsibility to notify the board when he had free time.

That psychiatrists, too, have time available for referrals was noted at a recent meeting where it was learned that for the group as a whole a full week of psychiatric time was going unused. A referral system as described here would eliminate such a waste of manpower. It would also diminish the practice among physicians of sending patients, as a last resort, to a psychiatric hospital when outpatient care would have sufficed, or to a nonmedical practitioner, namely, a clinical psychologist not under the direct supervision of a psychiatrist.

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* Actual figure, 2,001,897 from 1960 Census. Includes the District of Columbia, Prince Georges and Montgomery Counties in Maryland, Arlington and Fairfax Counties in Virginia, and Alexandria and Falls Church, Va.

The referral system could become operational simply by distributing a questionnaire (shown on opposite page) to all psychiatrists in the Metropolitan Area to ascertain their interest in and qualifications for participation. Any one of the local medical societies, in line with its responsibility to provide improved services to private physicians and their private patients, would be the sponsoring organization. The system could then be operated out of its medical answering-service.

Naturally, certain operating criteria could always be ironed out by the appropriate committees. These criteria might include: whether referrals would be directed to psychiatrists who are not members of one of the local psychiatric societies; whether the central board should list the fee range; whether the system would provide for emergency calls, hospital consultations, or hospital psychiatric care, take children, adolescents, adults, and/or the elderly; whether the practice of the participating psychiatrist is to be limited to psychotherapy, psychoanalysis, physical therapy, or medication; whether or not the psychiatrist has full-time patient responsibility or works at an institution also, etc.

The revolving file or roster of names maintained at the central board would be the key to the types of psychiatric services available. Each file card would contain readily accessible information (see preceding paragraph) on each participating psychiatrist, along with his name, addresses, telephone numbers, and customary office hours (shown below).

The financing of such a system is another essential detail. Several possibilities suggest themselves, such as, a fee from each participant and/or the financial support of such groups as the Washington psychiatric and medical societies, Montgomery County and Prince Georges County medical societies, the D. C. Association for Mental Health, the Foundation for Community Aid to Mental Patients, the Montgomery County Mental Health Association, the Eugene Meyer Foundation, or others. The amount that such groups would need to provide would be minimal and would hardly cause a ripple in their budgets.

Since local medical answering-services are already staffed and equipped, the psychiatric referral system could be quickly and easily fitted into the operation and could be maintained with little extra effort and expense. The volume of calls, moreover, would be measurably less than

PSYCHIATRIC REFERRAL SYSTEM
(Answering Service File Card)

<table>
<tr><td rowspan="2"></td><td colspan="4">AVAILABLE FOR (check)</td></tr>
<tr><td>House Calls</td><td>Emergency Calls</td><td>Psychotherapy</td><td>Psychoanalysis</td></tr>
<tr><td>Name</td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="2">Office Address</td><td colspan="2" rowspan="2">HOSPITAL PRIVILEGES</td><td colspan="2">AVAILABLE TIME</td></tr>
<tr><td>Open</td><td>Closed</td></tr>
<tr><td>Home Address</td><td colspan="2"></td><td></td><td></td></tr>
<tr><td>Office Phone Number</td><td colspan="2"></td><td></td><td></td></tr>
<tr><td>Home Phone Number</td><td colspan="2"></td><td></td><td></td></tr>
</table>

A PSYCHIATRIC REFERRAL SYSTEM

The Montgomery County, Prince Georges County, and District of Columbia Medical Societies wish to improve the referral of psychiatric patients handled through their respective Medical Bureaus. Members of these Societies have expressed discouragement over difficulties experienced in getting patients seen for psychiatric consultation and treatment. By using the answering-service of one of the Medical Bureaus it is hoped that the following system will be established with your help:

The Medical Bureau would maintain a list of all interested psychiatrists in the area. By calling the Medical Bureau to report your availability, you would have your name put on a list of psychiatrists who would be free to see patients within the next 3 weeks. When your own calendar was completely filled, you would again call the Medical Bureau to ask that your name be taken off the referral list and held in reserve. When you once again had some open time you would once more call the Medical Bureau and your name would be placed again on the referral list. In this way the referring physician or the patient would not unnecessarily call psychiatrists who were unable to accept new patients. This method is seen as supplementing the already established direct personal referrals known to each psychiatrist.

To get this system established we need to have answers to the following questions. When you have answered them, please return this questionnaire to:

Chairman
Psychiatric Referral System

QUESTIONNAIRE FOR PSYCHIATRISTS

Name ____

Address ____

1. Are you interested in participating in the Psychiatric Referral System outlined above? Yes ______ No ______
   Want more information ___

2. Are you Board-qualified? Yes ______ No ______

3. Are you interested in:
   a. General clinical practice of psychiatry Yes ______ No ______
   b. Intensive psychotherapy Yes ______ No ______
   c. Psychoanalysis Yes ______ No ______
   d. Institutional psychiatry Yes ______ No ______

4. Will you:
   a. Make emergency house calls? Yes ______ No ______
   b. See adults only? Yes ______ No ______
   c. Make hospital calls? Yes ______ No ______
   d. See children under twelve? Yes ______ No ______

5. Will you take criminal or legal cases? Yes ______ No ______

6. What hospitals will you visit to make a psychiatric consultation?
   Any ________________
   Specify ______________
   ____
   ____
   ____

7. Would you be willing to commit? Yes ________ No ________
   Maryland ______________
   D. C. ________________

the volume now being handled by the answering-services on an unimproved basis.

Success in launching and maintaining the system rests heavily on getting word of its existence and ready availability to potential users. One of the prime points to be emphasized would be the kinds of services it could provide to relieve the busy private practitioner of many time-consuming and burdensome tasks, both big and little. Publicity would, therefore, play an important role in establishing the system as a part of the community. Notices could be sent to all physicians in the area, to newspapers, to the District of Columbia, Montgomery County and Prince Georges County medical journals, to medical and psychiatric societies, hospital admitting offices, answering-services, police and fire departments, rescue squads, and other potential users and participants.

The simplicity of the system, both its establishment and operation, makes one wonder why it has not been done in this area before now. It differs in many respects from other methods of referral which have been described in the literature of the past 6 years.[1-7]

Summary

A psychiatric referral system that would provide the area's private-practice physicians with a variety of psychiatric services, promptly and easily obtained by dialing a central switchboard, is now practicable. It can be readily put into operation by fitting it into the activities of an existing medical answering-service, and its modest operating expenses could be borne with no strain on the budget by local professional societies, associations and foundations. It would meet not only the needs of busy physicians but also those of local psychiatrists who wish to bring their services to their medical colleagues. The benefits that would accrue to mental patients referred to the system would often be the difference between prolonged treatment in less than adequate facilities and outpatient care or prompt attention leading to early recovery.

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Granuloma of the Rectosigmoid Producing Bowel Obstruction

Report of a Case

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INFECTION OF THE GASTROINTESTINAL TRACT by *Endamoeba histolytica* is occasionally complicated by the development of a granulomatous mass located either in the cecum, transverse colon, or rectosigmoid. Reports of amebic granuloma in general are rare, particularly those of the rectosigmoid which produce obstruction and simulate carcinoma.

Report of Case

A 24-year-old white male soldier with 6 months of military service was first seen at Walter Reed General Hospital on May 12, 1961 complaining of diarrhea, severe rectal tenesmus, anorexia, fever, and weight loss. He stated that he had been in good health until April 20, 1961, when he first noted a change in bowel habits. Instead of having his usual 1 stool per day he began to have 5 to 6 soft, brown movements daily. Initially there was no gross blood present. One week later he began to "feel constipated" and developed frequent episodes of severe rectal tenesmus during which he would pass orange- to red-stained mucoid material with very little feces. These episodes increased in frequency until he was having 30 to 35 such movements per day. With each he passed only small spurts of blood-tinged mucus. There was an accompanying sensation of being unable to completely evacuate his rectum. He was seen at his local medical installation where stool examination revealed *Ascaris lumbricoides* and cysts of *Endamoeba histolytica*. These findings led to his hospitalization.

On admission his temperature was 99°F. There were no abnormal physical findings except perianal erythema and excoriation. The abdomen was scaphoid with no masses or areas of tenderness. There was no hepatosplenomegaly, and the bowel sounds were active and normal. Digital examination of the rectum was unusually painful but no masses were felt. He was somewhat anorectic but had no nausea or vomiting. There was a loss of about 7 pounds since the onset of the illness. The patient had spent the summer of 1960 in North Africa as a civilian public relations worker. While there he had eaten frequently in the homes of natives. However, during his stay in Africa he had had no gastrointestinal symptoms but recalled that amebic dysentery was very common in the areas that he visited.

Routine laboratory tests were normal except for a white blood cell count of 13,400 per cu. mm. with a differential count of 91 per cent neutrophils, 8 per cent lymphocytes, and 1 per cent eosinophils. Stool cultures and rectal swabs were negative for enteric pathogens. No organisms resembling *Neisseria gonorrhoeae* were seen. Serologic tests for febrile agglutinins were negative. A few ova of *Ascaris lumbricoides* and *Trichuris trichiura* were present, but no cysts or trophozoites of *Endamoeba histolytica* were seen either on direct smear or culture. A proctoscopic examination done shortly after admission revealed the entire rectal mucosa to be hyperemic, granular and friable with easy bleeding on minimal trauma. About 5 inches from the anal ring an irregular area was encountered having the consistency of gristle or cartilage and the appearance of malignancy. Because of the severe pain and spasm it was impossible to introduce the proctoscope through this strictured area. A biopsy revealed chronic nonspecific ulcerative inflammation but no evidence of malignancy or *Endamoeba histolytica* (figure 1).

Following admission the patient's general condition worsened. His rectal tenesmus became more marked. Abdominal cramps developed with episodes of profuse diarrhea alternating with periods of inability to pass fecal material. Incontinence of small amounts of pinkish-stained mucoid material became a problem. He continued to lose weight and to run a low-grade fever. In early June urinary frequency and urethral burning developed. However, repeated urinalyses were negative. Repeated warm stool examinations for amebae continued to be negative on direct smear and culture. Piperazine citrate (Antepar®) and C. dithiazanine iodide (Delvex®) were successful in ridding the patient of his Ascaris and Trichuris infection. A barium enema done shortly after admission revealed diffuse ulceration of the rectum with an area of narrowing in the adjacent sigmoid which measured 8 cm. in length and 1.5 to 2 cm. in width (figure 2). The remainder of the colon did not

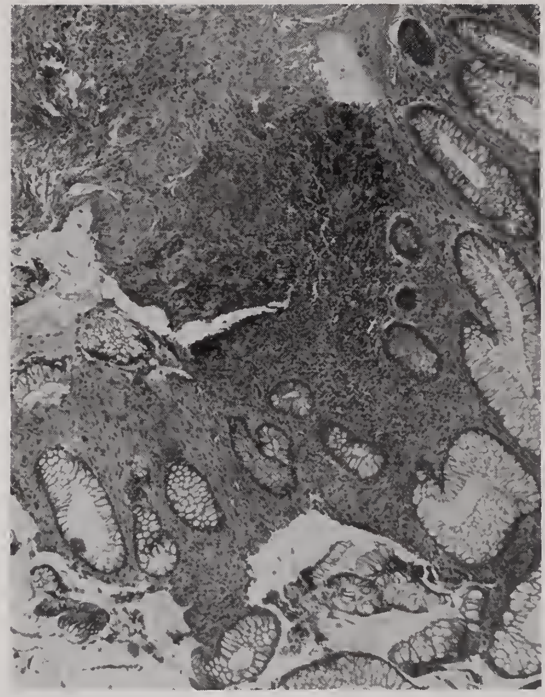

FIG. 1. Rectal biopsy showing inflammatory cell infiltration.

fill with barium, but the flat film revealed a large amount of fecal material and air.

About 19 days following admission the patient passed about 600 c.c. of fresh and clotted blood per rectum. The hemoglobin fell to 12.6 Gm. with a hematocrit of 38 per cent; later they dropped to 10.7 Gm. and 34 per cent. Proctoscopy and biopsy of the constricted lesion of the rectosigmoid were repeated. The pathologic diagnosis again was chronic nonspecific colitis involving the muscular mucosa and submucosa. No amebae were seen in the tissue. Dr. Henry Tumen of Philadelphia, Consultant in Gastroenterology at Walter Reed General Hospital, proctoscoped the patient and thought that a granulomatous process was present which was most likely due to *E. histolytica* despite the fact that this parasite could not be found in the patient's stools or biopsy material. He recommended that a trial of antiamebic therapy be given. Accordingly, the patient was placed on 650 mg. of Diodoquin® 3 times daily and chloroquine phosphate 500 mg. twice daily for a period of 15 days. On this regimen he slowly improved. The abdominal cramps and rectal tenesmus became less severe, and there was no longer fecal incontinence. The patient continued to have 6 to 10 unformed stools per day. By July 7, 1961 it was possible to proctoscope the patient to 16 cm. The rectosigmoid stricture was less marked and the granulomatous changes less severe, and the temperature had fallen to normal. There was no longer any anemia. The patient began to gain weight. He was started on a second course of Diodoquin therapy and was discharged from the hospital on a convalescent leave status. On returning to the hospital in late July, 1961 he was virtually asymptomatic. He was averaging only 2 to 4 semiformed stools daily, was free of abdominal discomfort, and was completely continent. He passed only small amounts of mucus once or twice daily. Proctoscopic examination done in early August, 1961 revealed great improvement in the appearance of the rectosigmoid. The inflammation, friability, and granularity of the rectal mucosa were much less severe. However, the strictured area persisted in the rectosigmoid, but spasm and irritability had decreased and the proctoscope could be passed into the strictured area for the first time. A repeated barium enema revealed a normal bowel pattern above the rectosigmoid stricture (figure 3).

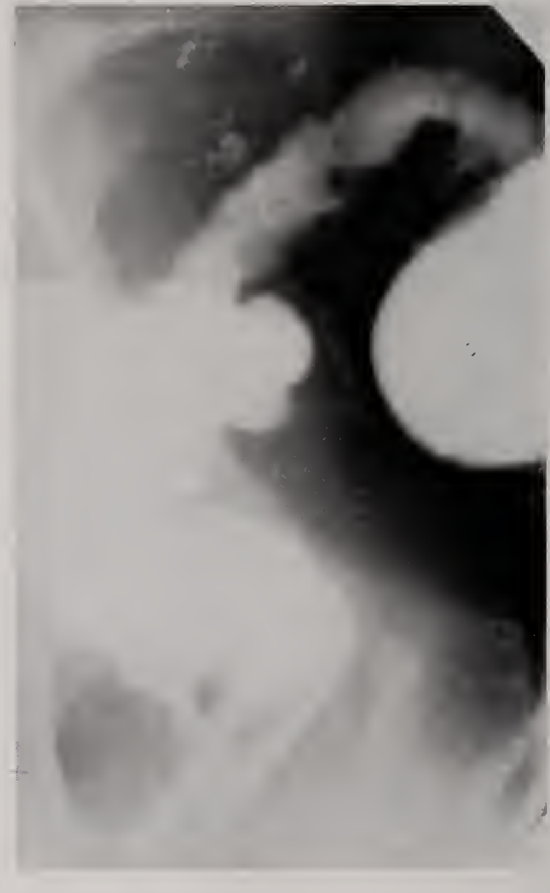

FIG. 2. Constricted, irregular granulomatous area of rectosigmoid region during acute phase.

The patient returned to a duty status and was proctoscoped periodically over the next 15 months. He continued to feel well, to do full military duty, and was able to take part in athletics. For many months the strictured area persisted and the mucosa continued to show evidence of some granularity and friability. Further antiamebic therapy consisting of 0.25 Gm. of Carbarsone,® 3 times daily for 10 days and chloroquine, 0.25 Gm. daily for 14 days was given. A barium enema done October 26, 1961 was interpreted as normal with no evidence of the previously reported stricture in the rectosigmoid colon. On November 30, 1961, because of some mucosal abnormalities still seen on proctoscopic examination the patient was again placed on chloroquine, 500 mg. twice daily for 10 days and Diodoquin, 650 mg. twice daily for 21 days. A repeated barium enema done on June 5, 1962 was again interpreted as normal. Despite these normal X-ray findings the bowel continued to show some evidence of friability and narrowing until November, 1962, when, for the first time, the mucosa appeared to be healed. The previous area of granularity and friability was replaced with a whitish scar, and some narrowing of the lumen remained.

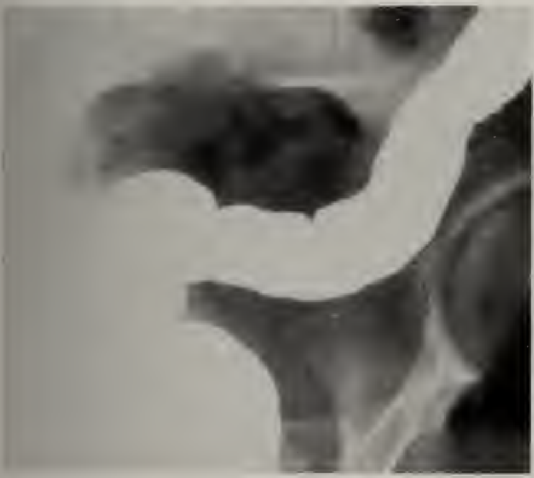

FIG. 3. Complete healing of previously involved rectosigmoid colon.

Discussion

In 1942 Ochsner and DeBakey[1] coined the term "ameboma" to designate a localized granulomatous thickening of the intestinal wall caused by infection with *Endamoeba histolytica*. Over the years scattered reports of this condition have appeared in the literature stressing the fact that it may be confused with carcinoma.[2-9] Amebic granulomas may involve any portion of the colon but most often occur in the rectosigmoid segment. In recent years a number of cases have been described involving the cecum and transverse colon.[2, 5, 6, 8, 10-15] On microscopic examination the lesions consist of ulcerations which extend to the submucosa and have a surrounding area of fibroblastic proliferation, edema, and round-cell infiltration.[6, 10, 16] Amebic infections may be contracted a long time before they produce symptoms.[6] This patient probably received his infection in North Africa about 9 months before his symptoms became manifest. At the same time he also picked up ascariasis or trichuriasis. The trophozoites and cysts of *E. histolytica* may be few in number.[8, 16] Despite the fact that multiple stools were examined on this patient by well-trained parasitologists, only 1 of them showed definite evidence of the parasite. On another occasion purulent exudate taken from the rectum was reported by a pathologist as showing *E. coli.* In retrospect the organism seen was probably *E. histolytica.* The patient's course exemplifies the fact that once an "ameboma" develops it may give rise to rapid emaciation, fever, anorexia, malaise, abdominal pain, severe gastrointestinal bleeding, and chronic bowel obstruction.[6, 8, 10] His total weight loss was 20 pounds. For a period of 4 weeks the temperature elevation varied from 99° to 100°F daily. Abdominal pain, cramps, distention, and frequent attempts to evacuate stool were manifestations of incomplete bowel obstruction. Severe rectal tenesmus with frequent involuntary passage of small quantities of blood-tinged mucus was a prominent feature of the disease. The brisk bleeding episode which occurred is a well-known complication of amebic granuloma.[6, 8, 10, 17] Chronic blood loss and toxicity are responsible for anemia in these patients.[6, 17]

The proctoscopic and X-ray appearances of the bowel lesion were in no way specific and could not be distinguished from a malignant neoplasm or other granulomatous process. The patient's urinary symptoms were most likely due to extension of the bowel infection into the adjacent bladder wall. Slow response to antiamebic therapy with sluggish disappearance of the amebic granuloma has been noted by others and was noted in this patient.[6] The lesion responded slowly to treatment. For several weeks after the barium enema studies were interpreted as normal, proctoscopic examination revealed the involved area of the patient's rectosigmoid mucosa to show abnormal changes.

Summary

A case of amebic granuloma of the rectosigmoid colon has been reported. The diagnosis is believed to have been established by the patient's clinical course, the presence of *E. histolytica* in at least 1 stool examination, and the disappearance of the granuloma after antiamebic therapy.

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(Continued on page 446)

Renal and Possibly Hepatic Toxicity from Coly-Mycin

Report of a Case

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Coly-Mycin® is a complex polypeptide which was first discovered by Koyama in 1946 and reported by him and his co-workers in 1950 in Japan. Actually, it has been noted that Coly-Mycin is a misnomer since it is not a mycin but actually is a fermentation product of *Aerobacillus colistinus*.[1] This is an aerobic spore-forming soil bacillus which is related to *Aerobacillus polymyxa*.[2] Coly-Mycin has an empirical formula of $C_{45}H_{85}O_{10}N_{13}$ and a molecular weight of approximately 1,200.[2, 3] Its molecule consists of d- and l- leucine, l-threonine, α-, γ- diaminobutyric acid, and 6 methyloctanoic acid.[4, 5] It differs qualitatively from polymyxin B by the absence of phenylalanine.[5] With paper chromatography and amino-acid analysis, Coly-Mycin could not be distinguished from polymyxin E.[6]

This drug has the same spectrum of antibacterial activity as polymyxin, and its main advantage is that it is less toxic. With the increased use of antibiotics, Pseudomonas infections have increased in importance because of superinfection of the respiratory and genitourinary tracts. Pseudomonas has always been important in surgical wounds and burns.[1]

Coly-Mycin has had extensive use in Japan, Italy and France since 1950, and the literature from those countries is quite enthusiastic about its use. It has only recently received wide attention in this country. It has been shown to be effective in gastroenteritis in children, pertussis, and in surgical, genitourinary, otorhinolaryngologic, obstetric, and fungal infections.[7] It has also been used for the treatment of brucellosis.[8] During the 10 years of its use in Japan, Italy and France there has been no report of serious renal or hepatic toxicity.

Coly-Mycin is available in 2 preparations, that is, colistin sulfate and colistin methanesulfonate. The former is used orally for the treatment of gastrointestinal infections, and the latter is the parenteral form. Neither is absorbed when administered orally, and both are supplied as base equivalents determined by their activity toward a strain of *Brucella bronchiseptica* (ATCC4617).[9] They differ in activity in vitro; however, this is not important clinically because of the concentrations used in the tube-dilution sensitivity tests.[9]

I believe that the patient to be presented represents an instance of renal toxicity of Coly-Mycin and is the first report of possible hepatic toxicity of this drug.

Report of Case

This was the first Mt. Alto Hospital admission (July 3, 1962) for this 64-year-old Negro, a retired fireman. His complaint was that of generalized weakness of 2 months' duration. He had had diabetes mellitus for 7 years previous to admission and at one time was taking 20 units of NPH insulin daily; however, he stopped taking insulin 1 year prior to admission after noting the absence of glycosuria. He had dyspnea on exertion. He told of an episode of dyspnea, diaphoresis and palpitation 1 month previous to admission while waxing a floor. These symptoms ceased immediately on rest. He denied chest pain and respiratory and gastrointestinal symptoms. He had had nocturia and hesitancy and urgency of urination in the past but not at the time of his admission.

Physical examination revealed a well-developed, obese, short Negro in no distress. The blood pressure was 150/100. The ocular fundi showed arteriolar narrowing and A-V nicking. There were a few crepitant basilar rales in both lungs. Otherwise the physical examination was normal.

At the time of admission complete blood count, fasting blood sugar, blood urea, nitrogen, VDRL, urinalysis, total protein and A/G ratio, stool guaiac, blood uric acid, and serum bilirubin were normal. An X-ray film of the chest showed bilateral congestion, and the electrocardiogram revealed large Q waves in V_2 through

V_4, ST-segment elevation in V_3 and T-wave inversion in leads V_3 and V_4. Serial SGOT determinations during the first several days of hospitalization showed values of 49, 48, 48, 16. The possibility was considered that the patient had a clinically silent myocardial infarction, and he was treated with bed rest. Serial electrocardiograms showed no change.

Gradual ambulation was begun after several weeks of bed rest, and the hospital course was uneventful until 4 weeks after admission, July 28, at which time the patient suddenly developed chills, fever, and a temperature of 102.8°F (orally). There were a few rales at the left base; therefore, after appropriate cultures were taken, parenteral pencillin was begun for a suspected pneumonitis. After 2 days of an unchanged course 2 blood cultures were reported as showing gram-negative rods, and kanamycin, 0.5 Gm. I.M., and Coly-Mycin, as the colistimethate sodium preparation, 150 mg. I.M., every 8 hours were given. After 2 days sensitivity studies showed the organism to be *E. coli*, sensitive to kanamycin, Coly-Mycin, and Chloromycetin.® The kanamycin was then stopped after 6 doses and the Coly-Mycin continued. Blood cultures subsequent to the advent of Coly-Mycin therapy were negative. The blood urea nitrogen was watched closely, and the Coly-Mycin was stopped and Chloromycetin begun when the blood urea nitrogen rose to 44 mg./100 ml. from initially normal values (figure 1). The serumcidal level of Coly-Mycin was 16:1 and that of Chloromycetin was 32:1. The patient complained of only mild bilateral lower abdominal pain for 2 days after the onset of the septicemia. Urine cultures were repeatedly negative. X-ray films of the chest showed the absence of active disease, and fluoroscopy revealed the diaphragm to move well. Repeated electrocardiograms were unchanged and showed loss of anterolateral forces and persistent S-T segment elevation in the precordial leads. The patient continued to be febrile until 11 days after the initial febrile episode, that is, until the Coly-Mycin was stopped and the Chloromycetin begun, after which time he remained afebrile. He had good urine output throughout his hospitalization.

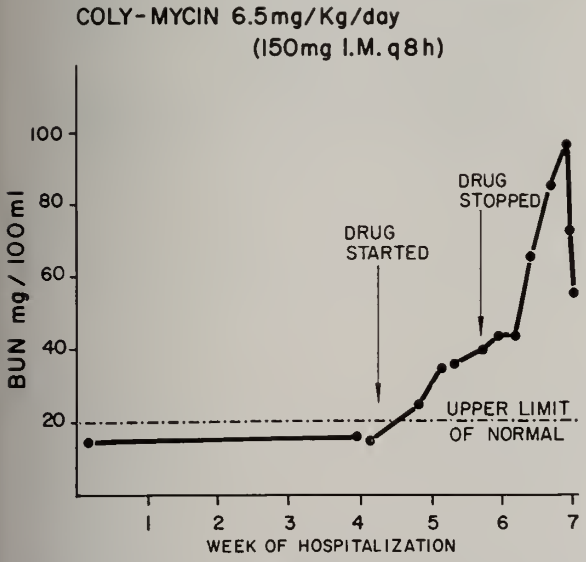

FIG. 1. Serial determinations of blood urea nitrogen showing a rise from normal to distinctly abnormal values after drug therapy and after a continuing rise a fall toward more normal values after the drug was stopped.

On August 19 the patient's skin was noted to be cool and clammy, and he was hypotensive. For the next 36 hours vasopressors were required after which the blood pressure was maintained without vasopressors. Additional laboratory studies during hospitalization revealed normal upper gastrointestinal X-ray examination, bromsulfalein of 0 per cent retention, persistent leukocytosis with a shift to left, normal electrolytes, normal lumbar puncture, prothrombin time of 35 per cent (while on antibiotics), and a progressive decrease in hematocrit and reticulocyte count after the advent of Chloromycetin therapy. The SGOT began to rise after Coly-Mycin therapy was begun and decreased to normal values after the drug was stopped (figure 2). On the day of demise an electrocardiogram showed A-V dissociation with a nodal tachycardia which was thought to be due to digitalis toxicity. The patient died quietly on August 23 several hours after the digitalis was stopped.

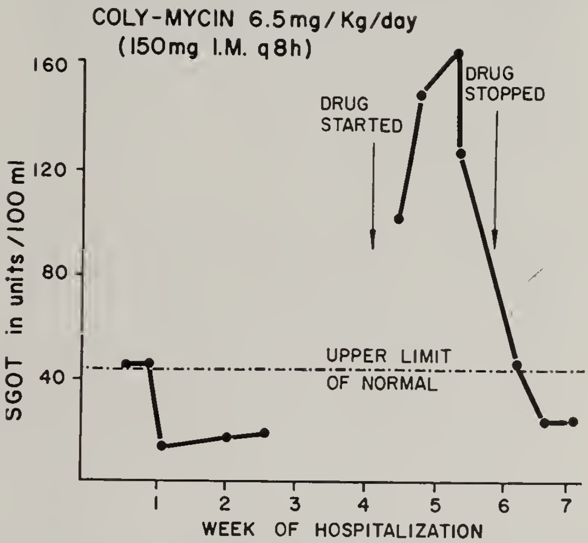

FIG. 2. Determinations of SGOT showing initially normal values before drug therapy, a rise to 180 U/100 ml. during drug therapy, and a fall to normal values after drug was stopped.

Postmortem examination revealed an old dense infarct of the interventricular septum with an attached laminated old thrombus. Microscopic examination of the heart showed no evidence of recent injury. There was an area of old infarction which was interpreted as being at least several months old. Numerous diverticula were found in the descending colon and sigmoid, 1 of which was inflamed and ruptured with an abscess 1 cm. in diameter inside the mesenteric adipose tissue.

Microscopic examination of the liver revealed focal vacuolization of hepatic cells in the centrilobular fields with areas of focal necrosis. These slides were interpreted as showing nonspecific changes such as those seen in drug-induced hepatotoxicity. The kidneys showed vacuolic degeneration of the epithelium of the proximal convoluted tubules and sloughing of the epithelium of these tubules (figure 3). There were areas of normal-sized tubules lined by very flattened tubular epithelium with irregular hyperchromatic nuclei which were interpreted as regenerating epithelium (figure 4). Sloughed necrotic epithelial cells were noted in the lumina. In addition, the kidneys showed a moderate degree of diffuse diabetic glomerulosclerosis with moderate thickening of the basement membrane which did not encroach upon the vascular bed of the glomerulus. A moderate degree of focal pyelonephritis was also noted. The tubular epithelial changes were interpreted as compatible with drug toxicity, and it was thought that the areas of focal pyelonephritis and diffuse glomerulosclerosis were unrelated to the tubular changes.

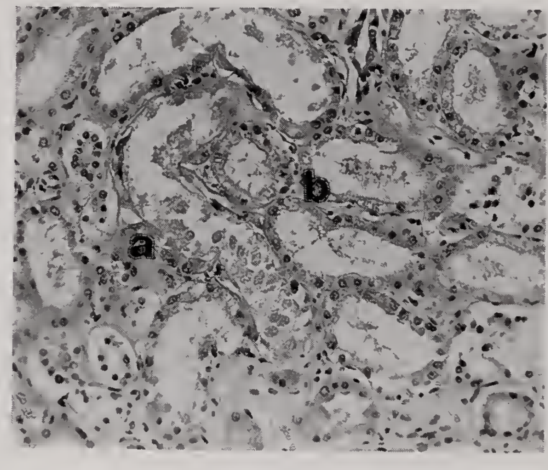

FIG. 3. (a) Tubule lined by cells showing early regeneration, sloughing, and degenerated epithelial cells in tubule lumen; (b) tubular cells showing vacuolar degeneration.

Discussion

The antibacterial spectrum of Coly-Mycin includes gram-negative bacilli, such as Salmonella, Shigella, Pseudomonas, Coliform, Brucella, and Hemophilus. It has also been reported to be of some use in staphylococcal infections and in candidiasis,[7] but the major investigative work has not supported its use in the latter 2 types of infections. Coly-Mycin and polymyxin have bacteriostatic and bactericidal activity against more than 80 per cent of *E. coli*, Klebsiella, and Pseudomonas strains from hospitalized patients. More of these strains were sensitive to them than to the other antibiotics tested.[9] Ninety-two per cent of Klebsiella strains were inhibited, and 80 per cent of the strains were killed by 5 to 10 μg./ml. of Coly-Mycin, which is a level easily obtained even with low doses of the drug.[9] Coly-Mycin has been shown to be as effective or more effective than other antibiotics for 94 per cent of *E. coli*, 86 per cent of Klebsiella, and 93 per cent of Pseudomonas infections.[9] The only time that the oral preparation is indicated is in the treatment of specific gastrointestinal infections.[10]

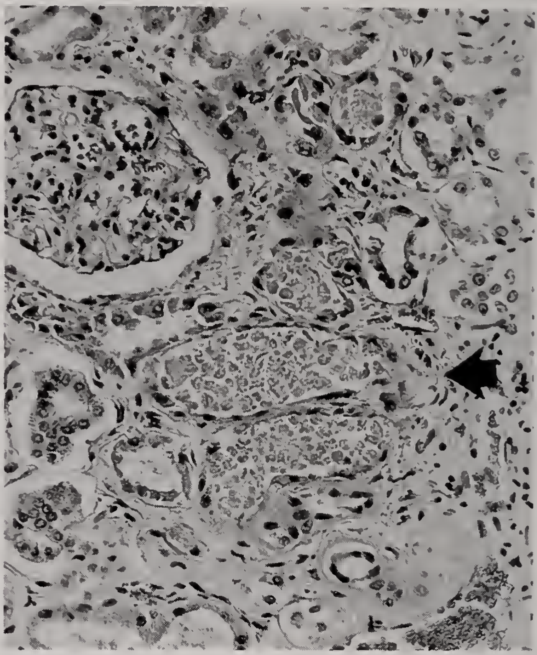

FIG. 4. Arrow points to middle of 3 normal-sized tubules lined by regenerating epithelial cells. Note the flattened tubular epithelial cells with hyperchromatic nuclei and sloughed necrotic epithelial cells within tubular lumina.

Comparing the effectiveness of Coly-Mycin and polymyxin B, Hirsch et al[11] found that after in vitro testing of 232 strains of gram-negative organisms 30 per cent of the strains were equally sensitive to the 2 drugs. Fifty-five per cent of the strains were more sensitive to polymyxin and 15 per cent were more sensitive to Coly-Mycin, but these differences were only slight and usually in less than a 2-fold dilution. *Neisseria gonorrhoeae* and *H. influenzae* were 3 to 4 times as susceptible to polymyxin in the great majority of strains tested.[11] It is generally agreed that Proteus organisms are usually not affected by Coly-Mycin.[1, 5, 11, 12, 13] Rarely, however, it was found that when a Proteus strain was sensitive to Coly-Mycin it was exquisitely sensitive to it, e.g., in a concentration of 1 μg./ml. in 1 particular case.[12]

The clinical effect of Coly-Mycin follows closely the in vitro effect, a fact which is quite important in drug therapy. Ross and his co-workers[14] have reported on the use of this drug in specific gastroenteritis in children. Their results were good in pathogenic *E. coli* infections, fair in Salmonella infections, and disappointing in Shigella and typhoid gastroenteritis. Scevola[8] reported on a 63-year-old patient with a *Brucella melitensis* infection which had not responded to Chloromycetin and tetracycline therapy but did respond dramatically to therapy with Coly-Mycin. Marconi[15] used the drug on 53 patients with surgical infections with apparently good results.

In vitro sensitivity studies of 170 strains of Pseudomonas with 10 antibiotics showed 99.4 per cent of the strains to be susceptible to polymyxin at a concentration of 12.5 μg./ml. or less and 97 per cent susceptible to Coly-Mycin at the same concentration.[16] It was thought by the same authors that the minimum inhibitory concentration could be safely attained and maintained in the urine and probably in the blood for a few days with the recommended parenteral dose of Coly-Mycin, provided renal function was normal. On the other hand, only a few of the strains were susceptible to concentrations that are safely attainable with 8 other antibiotics. Meleney and Prout[1] used Coly-Mycin parenterally and locally and found that results of infections treated locally or locally and parenterally were better than the results of infections treated solely parenterally. They also showed that when Proteus and Pseudomonas existed in the same culture the Proteus interfered with the potency of the Coly-Mycin against Pseudomonas. They found that 92 per cent of the strains of Pseudomonas and 95 per cent of the strains of *E. coli* were sensitive to Coly-Mycin, but several other antibiotics were much less effective. Most Aerobacter and Paracolon organisms were also sensitive to the drug.[1] The organisms in *E. coli* genitourinary infections were inhibited by 10 μg./ml. of the drug in 18 of 19 instances.[13] Fifteen of these strains were killed by the same concentration. Approximately the same results were obtained in Klebsiella genitourinary infections except that in these infections kanamycin was almost as good. The same authors reported that all 15 strains of Pseudomonas were inhibited by 5 μg./ml. of Coly-Mycin, and 13 of them were killed by that concentration. Only 2 out of 91 strains of Proteus were sensitive to Coly-Mycin.[13]

The mode of action of Coly-Mycin was studied by Mohan and Pianotti,[17] who concluded that the drug probably reacts with the cell membrane since it causes leakage of intracellular nucleosides and inhibits some of the dehydrogenases. These thoughts are similar to those of Newton, who postulated that the action of polymyxin may be the result of a decrease in interfacial tension at the cell membrane produced by a combination of the antibiotic with the ionized phosphate groups of the phospholipid components of the membrane. He also pointed out that various surface-active agents, nucleic acids and bivalent cations, interfere with this activity.[3] This similarity of mode of action of these 2 polypeptides is entirely expected in view of their close chemical and clinical similarities.

The great enthusiasm for Coly-Mycin has been stimulated by a search for a bactericidal agent which is effective in gram-negative infections in nontoxic doses. Thus far reports have shown Coly-Mycin to be just this type of drug. In acute toxicity studies with mice there was very slight kidney damage, consisting of mild renal irritation, congestion, epithelial swelling, and focal tubular necrosis.[6] In rats there was no kidney or liver damage, but stomach inflammation was observed.[6]

In 44 patients, Hall[5] noted local pain at the site of injection in several, transient vertigo and circumoral paresthesia in 1, and a transient small rise in the blood urea nitrogen in 1. McCabe and Jackson,[18] using total daily doses of 130 mg., observed the absence of hepatic and renal toxicity even though 13 of the 39 patients they studied had initial blood urea nitrogen values of greater than 50. They concluded that Coly-Mycin was less bactericidal and less nephrotoxic than polymyxin B.[18] Meleney and Prout[1] used up to 270 mg. daily in 20 patients and noted the absence of liver, kidney and hematologic toxicity. They noted better results when their initial doses were doubled and suggested the use of up to 750 mg. per day in severe infections. Marconi[15] reëmphasized the absence of toxic effects of therapeutic doses in man. Slight rises in blood urea nitrogen in infants treated with Coly-Mycin for specific gastroenteritis seemed to be dose-dependent.[14] Using average doses of 66 mg. daily, Yow and colleagues[7] found no histologic evidence of nephrotoxicity on 8 renal biopsy specimens. In 10 healthy subjects who received a total of 330 mg. daily of the methanesulfonate preparation for 5 days no abnormality was noted in urinalyses, blood counts, or liver function tests.[19] Wolinsky[20] described 3 adults with chronic renal disease, 2 of whom had transient rises in blood urea nitrogen on Coly-Mycin therapy. Of 53 patients treated by McCabe,[12] there was no evidence of renal or liver toxicity. Roberts[21] found a small rise in the blood urea nitrogen of 2 patients out of the 10 he evaluated for change in renal function, utilizing up to 4.5 mg./Kg./day. He concluded that in other than genitourinary infections, 5 mg./Kg./day is indicated in adults, and up to 10 mg./Kg./day is indicated in children. Edgar and Dickinson[22] noted that nephrotoxicity did not result when doses of 120 mg. I.M. were administered every 8 hours to 60 to 70 Kg. males. One of their patients received a total daily dose of 720 mg. without observable nephrotoxicity.

Fekety[9] agreed that large doses of the drug are not necessary for genitourinary infections but are indicated for septicemia or pneumonia. Large doses are probably necessary for serious systemic infections because small doses rarely produce the high serumcidal levels of the drug that are necessary to eradicate such infections. In the same connection, it has been shown that simultaneous serum and urine concentrations of the drug are in the ratio of 1:20,[6] so that in local genitourinary tract infections small doses suffice. Fekety[9] has stated that doses up to 150 mg./day are well tolerated even in patients with uremia. He reports that histologic specimens of the kidneys of 2 patients who died during therapy with Coly-Mycin and of 1 patient with a rising blood urea nitrogen during Coly-Mycin therapy who had a renal biopsy showed no lesions attributable to Coly-Mycin. Fekety thought that the nephrotoxicity of this drug is reversible, resulting in no clear histologic damage. I would probably agree that to a point the nephrotoxicity is reversible as shown in the case of this patient who at the time of death had a blood urea nitrogen which was beginning to return to normal, and at autopsy not only showed microscopic evidence of tubular vacuolic degeneration and sloughing but also areas of regenerating epithelium. On the basis of the findings in this case, I would strongly suggest that Coly-Mycin may well produce histologic renal damage. It has been alleged that the occurrence of an increasing blood urea nitrogen during Coly-Mycin therapy is because the drug may be a vasoactive polypeptide which causes a reversible decrease in renal blood flow and glomerular filtration rate.[9] On the basis of the histologic findings in this case I would take issue with this statement and propose that the occurrence of a rise in blood urea nitrogen during Coly-Mycin therapy may well indicate a direct toxic effect.

In retrospect, I believe that this patient had diverticulitis with abscess formation and subsequently was afflicted with an *E. coli* septicemia. Before the results of the blood cultures were obtained he was treated for 2 days with penicillin and then for 2 days with kanamycin and Coly-Mycin. The Coly-Mycin was then continued for an additional 10 days, at which point the drug was stopped because the patient's blood urea nitrogen had risen from repeatedly normal baseline values to 44 mg. per 100 ml. (figure 1). The blood urea nitrogen continued to rise and then began to return toward normal. Urine cultures were repeatedly negative, and the patient denied urinary complaints. Liver function studies were normal, and SGOT values, although initially slightly elevated, were normal before the advent of the Coly-Mycin therapy, after which the SGOT rose progressively to 180 U/100 ml. and returned to normal after the Coly-Mycin was stopped (figure 2).

The episode of hypotension cannot explain the azotemia because it occurred while the blood urea nitrogen value was returning to normal. It is also unlikely that other drugs could produce the renal damage because of the short duration of their use in this case. The patient's urine output remained satisfactory throughout his hospital course. Histologically the renal findings were quite consistent with those seen with drug toxicity as were the findings in the liver, although the hepatic microscopic abnormality was thought to be more nonspecific.

It should be noted that larger doses of Coly-Mycin were used in the case presented here than have generally been used in previous reports. A total of 450 mg. per day in divided doses every 8 hours was used which was approximately 6.5 mg./Kg./day. This is a dose slightly higher than the recommended dose of the manufacturer but in the dose range suggested by some workers for severe systemic infections,[1] and less than the dose used by Edgar and Dickinson.[22]

This case report answers the question posed by Fekety and co-workers[9] in their recent article as to whether the increased dose of Coly-Mycin which is required to give greater serum activity in the more severe systemic infections can be attained without toxicity. Realizing the inherent limitations of drawing conclusions from a single case, I merely suggest an answer to this major question. The literature is laden with reports of the high degree of effectiveness of this drug in susceptible infections. Also, the decreased toxicity of Coly-Mycin compared to polymyxin B cannot be denied. The histologic lesion in the kidneys in this case is highly suggestive of nephrotoxicity of Coly-Mycin in the doses used, and hepatotoxicity is also suggested. Even in acute animal studies hepatotoxicity of this drug has not been previously described. Pending the report of more cases in which large doses of Coly-Mycin is used, one may conclude that it may be dangerous to use doses greater than 5 mg./Kg./day.

Summary

A patient was treated with Coly-Mycin for *E. coli* septicemia emanating from a perforation of a diverticulum in a dose of 6.5 mg./Kg./day or a total dose of 150 mg. I.M. every 8 hours. The blood urea nitrogen rose from normal to highly abnormal values and began to return to normal after the drug was stopped. Serum SGOT determinations also indicated a rise from pretreatment normal values to distinctly abnormal values and returned to normal after the drug was stopped. Autopsy revealed histologic findings compatible with drug nephrotoxicity and hepatotoxicity which have not previously been reported with Coly-Mycin. The dose used in this patient was higher than that used by most previous workers and suggests dose-dependent toxicity of this drug. This report should serve as a warning of awareness of signs of hepatic and renal toxicity, especially when using high doses of Coly-Mycin for severe infections.

Addendum: Since the above report the author has followed 2 similar cases. Both patients had genitourinary infections with underlying chronic renal disease. They were treated with Coly-Mycin in a dosage of 3 mg./Kg./day. Their infections were eradicated; however, they developed marked azotemia and they showed symptoms of uremia. With appropriate therapy the azotemia and symptoms of uremia were reversed. This should serve as additional caution when using Coly-Mycin in patients with known underlying renal disease.

Acknowledgment: The author is indebted to Dr. Sol Katz for his valuable guidance and to Dr. John S. Howe and Dr. Hans F. Smetana who reviewed the microscopic slides of this case.

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PRESIDENT'S PAGE

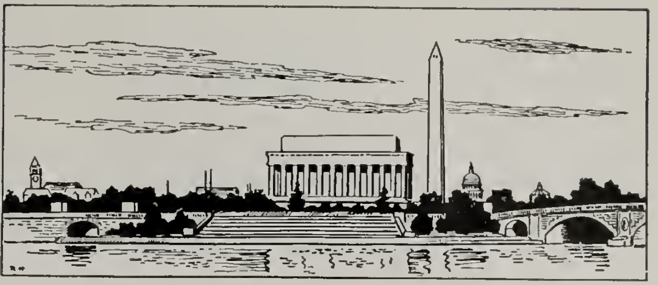
LET'S MAKE THE ASSEMBLY A SUCCESS

The Scientific Assembly does not just happen every fall. Shortly after the beginning of the Medical Society's year in January committees were formed and went to work, and how they have worked!

The Program Committee has struck off in a departure from former practices and has produced a bill of fare with interest for everybody, bar none. You will be hearing from the Social Affairs Committee on several scores and their activities are to be anticipated most pleasurably. Motion Picture and Exhibit Committees are chaired by veterans in both lines and their products should be better than ever. The Publicity and Attendance group is stepping up its campaign.

It remains for you, the general membership, to make the meeting a success by coming to look, to listen, to refresh yourselves scientifically and socially. How can you stay away after you have glanced at the various programs?

Make no mistake that you will regret later. This meeting is the distillate of tremendous effort by a number of dedicated workers and it should not be missed.



EDITORIALS

Leadership Carries Responsibility*

This is a big country. Like its climate and its terrain, its medical problems are many and varied. People who live in the hills have different problems than those who reside in the valleys. And the medical problems of great cities often do not exist in the smaller communities which dot our nation. Wise solutions of problems in one area may have no practical application in another.

Therefore, honest and honorable physicians have dedicated themselves to finding solutions to their own problems, without trying to make their decisions apply universally. . . .

So just as the strength of America is grounded on strong local government with individual responsibility, so also the strength of medicine is derived from the individual physician and his ability to work with his fellow physicians in the solution of basic problems everywhere, along with his additional acceptance of responsibility to solve those problems which may be uniquely his own or his confreres.

Now more than ever before, there is an obligation for all of us to waive or at least to minimize any differences between or within regions, specialties or organizations and to stand together on fundamental principles of medical care and medical practice, of enterprise and freedom for which our great Association has striven in the last 116 years.

To weaken ourselves from within when the enemy without is bold, strong and tough would be extreme folly on our part. To stand firmly united is a source of strength to all our members and our allies and a deterrent to our foes.

When the people have the truth and the facts about American medicine and the AMA, they will become aware of the preëminent position of medicine in the United States compared with other countries and they will resist with increasing strength the efforts to impose upon them any inferior alien system, no matter how it is disguised.

Unfortunately for the medical profession and its patients, a kind of plague has filtered across the face of medicine in recent years, spread by political opportunists who are dedicated to the destruction of medicine as a free institution as a means of gaining economic and political power over the American people. Their tools are those of the charlatan and the demagogue—misrepresentation, false labels, half truths. With emotional appeals designed to stir the heartstrings of America, they have fabricated a false portrait of need and destitution, they have sought to create a distorted image of American medicine, they have tried to downgrade private enterprise, to condemn individual initiative and self-reliance, and to discredit constitutional government with its checks and balances and safeguards designed to protect our liberties. And they have criticized worthwhile legislation as they have proposed compulsory, federalized programs as the cure-all for the ills they conjure up.

Fortunately, most Americans are honest, intelligent and wise in their ultimate decisions when they know and understand the extent of a problem. Wherever our position is known and understood, we have strong support. Those who know the true story of medicine recognize its real worth, and they are willing to work with us to correct any shortcomings and to improve the distribution of medical care to all of our citizens irrespective of their financial condition.

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* Excerpts from the President's Report to the House of Delegates of the American Medical Association, delivered, June 19, 1963, during the 112th Annual Meeting of the Association in Atlantic City, New Jersey.

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

Those who know and understand medicine, its deficiencies as well as its virtues, are our strongest allies, but the threat to medicine will continue as long as false leaders seek political advantage in promising something for nothing, in promising panaceas which they are unable to deliver. This threat will continue until the time when you and I have successfully brought our story to the American people.

Destiny lies with us if we but assert the statesmanship and the leadership which are so necessary to achieve these ultimate goals. But the role of leadership carries great responsibilities, and responsibilities must begin at home.

We must continuously expand our efforts to see that no one is denied medical care because of inability to pay. We must strengthen all programs to place physicians where they are needed.

We must increase our support of medical education.

We must double and triple our contribution to the student loan fund so that more students can help themselves obtain an education.

We must continue to study, to work and to bring the results of all these efforts—and hundreds more—to our patients.

We need coöperation with one another as never before, because how can we ask of others more than we ask of ourselves?

This will not be an easy task because, as someone has pointed out, the only place where "success" precedes "work" is in the dictionary.

Our effort may not be inexpensive because that which is good cannot be obtained quickly, cheaply. If we expect great things from a great organization for a great profession and for a great nation, we must be willing to bear the cost in time, in endeavor and in dollars.

Edward R. Annis, M.D.
President, American Medical Association

Are Verbal Rx's to a Patient Advisable?

It's 9 p.m. A physician's phone rings. It is Mrs. Jones, his patient. She tells him that she has a cough and that her temperature is normal. Her request: "Can you tell me what medicine I can take now, Doctor? I'll probably see you tomorrow."

This situation—and many others like it—brings up this question: Should the physician give drug information verbally to the patient?

A just-completed national survey conducted among pharmacists by *American Professional Pharmacist* magazine points clearly to the following answer: "In the interest of the patient's health and safety the physician should write prescription orders or phone them to a pharmacist."

More significant than the answer itself are the reasons for the answer. The study clearly shows that there are at least 6 specific reasons why verbal prescriptions given directly to the patient are generally not advisable:

Reason No. 1. With respect to verbal drug information, one of the problems encountered is sound-alike names of drugs. For example, when the patient is given the name of a drug the patient too often misspells or mispronounces it when relaying it. As a result the patient can actually take the wrong medicine, or, more frequently, not obtain it at all, because the pharmacist cannot interpret the request.

Reason No. 2. Drugs are available in several forms and strengths. Although the patient may have the correct name of the drug, she may not remember the form or the strength. As a result, because she is too embarrassed to phone the physician again, the patient may not even obtain the medication.

Reason No. 3. Very often a patient will forget the verbal dosage a physician prescribed for her. She will not remember, for example, whether she should take the medicine "before meals" or "after meals" or whether she should take it every 3 hours or 3 times a day.

Reason No. 4. In cases in which the patient correctly recorded or remembered the name of the drug it might turn out to be an "Rx only" drug and the pharmacist is unable to sell it without an Rx. The patient may then become angry at the physician and the pharmacist for the delay and the inconvenience.

Reason No. 5. When the patient knows the name of a drug that was prescribed for her she might, as a special "favor" to a friend, suggest that the friend take the medicine for "a similar condition." This potentially dangerous patient-to-patient "diagnosis" is unlikely to occur if the Rx is written.

Reason No. 6. A prescription given orally to a patient eliminates an exact written Rx record, stored at a pharmacy, as to what medicine was actually prescribed. This record can come in very handy with respect to protecting the physician against the ever-increasing number of malpractice suits.

From the above 6 reasons it appears rather clear that written prescriptions are in the best interest of both the public and the physician. Aside from preventing errors a written prescription will generally avoid any delay in getting the proper medication to the proper patient at the proper time.

Consequently, when medication is to be prescribed pursuant to a phone call or even during an office visit or house call, a written prescription is advisable.

If a written Rx is inconvenient or not possible it would be best for the physician to say to the patient, "What is the phone number of your pharmacist? I will phone a prescription to him." Or perhaps the physician can say, "Please ask your pharmacist to phone me."

Drug orders, therefore, are best communicated directly from the physician to the pharmacist whether the communication be via a written prescription or via the telephone.

Irving Rubin, Ph.G.
Editor, American Professional Pharmacist

The Ten Best in Medicine

We hear about the 10 best books, the 10 best plays, the 10 best dressed, and the 10 most wanted men. What are the 10 outstanding developments in the medical world?

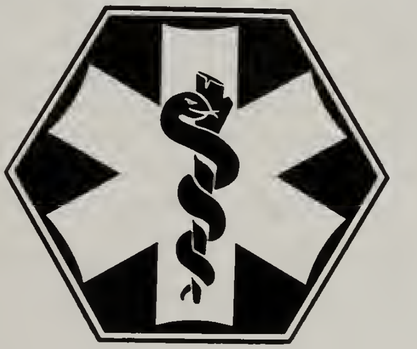
1. The Hippocratic Oath, the code of ethics generally sworn to by those who receive the degree of Doctor of Medicine.
2. Ligature or tying a vessel to prevent hemorrhage.
3. Discovery of quinine used in the treatment of malaria, the first important specific in therapy.
4. Edward Jenner's discovery of smallpox vaccination.
5. Discovery of the bacterial origin of disease by Pasteur.
6. Antiseptic and aseptic surgery and obstetrics, as advocated by Joseph Lister.
7. Discovery of transmission of disease by insects.
8. General and local anesthesia.
9. Diphtheria antitoxin.
10. William Conrad Röntgen's discovery of the X-ray.

To set down a list of 10-best is to invite argument. In truth, there are so many important discoveries and techniques in medicine, a list of 10 cannot contain them. The antibiotics, penicillin, polio vaccine, heart-lung machines, heart and brain surgery are all great advances. And the new specialty of space medicine will help to make space travel possible. (Pennsylvania Medical Society: *Your Health*, April 19, 1963)

And in my opinion, for the physician of the twentieth century certainly the telephone of Alexander Graham Bell leads all the rest.

A. L. E.

Emergency Care Symbol



The American Medical Association has designed this new universal symbol to call attention to a person in need of emergency care who is unconscious or otherwise unable to communicate that its wearer has a physical condition requiring special attention.

The symbol, which may be displayed on a wristlet, an anklet, a medallion around the neck, or elsewhere, is a sign that there are vital medical facts on a health information card in the bearer's purse or wallet or on an alerting device. The symbol could indicate allergies to antibiotics and many other physical problems.

The American Medical Association can provide emergency identification cards which fold to wallet size. A single card may be obtained free upon request from the AMA Department of Health Education. In sets of 100, they are available at $1.00 (up to 9 sets); in quantities of 1,000 or more they are available at $5.00 per thousand.

The Executive Offices of the Medical Society have on file a list of companies which will provide this symbol on an article suitable to be worn on the person.

ANNUAL REPORTS

Report of the Chairman of the Executive Board

Each year at this time the Executive Board reports on the affairs of the Society and makes such recommendations concerning policy as it deems appropriate.

The Board has met oftener than once a month and considered many items of business, several of which have already been reported in the Medical Annals. Since it is not possible to review all of these a brief comment on some of them follows.

At a special business meeting in the spring the Society authorized the Board to dispose of the present buildings at 1718 and 1710 M Street, N.W. and to purchase a new site on which to erect a building better suited to present needs. It is our plan to make the new Medical Society building the center of medical activities in the community. Its location and arrangement will make it a convenient and attractive place for meetings of committees and sections as well as for the smaller medical societies.

House Committee

For several years the House Committee has realized the inadequacy of our present building and the changing pattern in this area. The Committee has spent considerable time studying the Society's needs and looking for a suitable site for a new building. A contract for the sale of 1718 and 1710 M Street, N.W. is ready and will be signed before this report appears in the Annals.

Awards

The Board has chosen Dr. Zigmond M. Lebensohn to receive the Certificate for Meritorious Service. On the recommendation of the Committee on Public Information and Education Mr. Philip Talbot has been selected to receive the John Benjamin Nichols Award. The Board has recommended Dr. Paul B. Cornely to the A. H. Robins Company for its 1963 Community Service Award.

Cancer Advisory Board

On recommendation of the Cancer Control Committee the creation of a Cancer Advisory Board for the District of Columbia was approved. Its function would be to administer and enforce the provisions of the D. C. Code relating: (a) to the registration of individuals and associations engaged in the diagnosis, treatment or cure of cancer; (b) to advertising of cancer treatment; (c) to information as to the content and nature of drugs, medicines or devices used in the treatment of cancer; (d) to informing the public with respect to methods of cancer treatment offered in the District of Columbia; and (e) to recommend legislation to accomplish the declared objectives of the Code.

"Cancer Answers" Service

During the year the local Chapter of the American Cancer Society inaugurated a "Cancer Answers" service through which pertinent recorded messages on cancer were provided to those who called a given telephone number. In each message a physician was identified by name. After careful consideration and conference with Cancer Society representatives, the Executive Board recommended to the Cancer Society that the name of the individual doctor be omitted from these messages for a period of 3 months and that the results be tabulated over that 3-month period; that during such period equal publicity be given to the program; and that at the end of the period it be determined whether or not deletion of the name of the doctor had had any effect upon the public acceptance of the program. Instead of using the name of the doctor, it was suggested that he state, "This is a doctor in private practice from the Medical Society of the District of Columbia," and then proceed with the message.

Cancer Coördinating Group

With the approval of the Executive Board the Cancer Control Committee has initiated the organization of an autonomous coördinating and liaison group consisting of representatives from the various cancer organizations in the District of Columbia. Now fully organized, the Cancer Coördinating Group of the District of Columbia serves as an advisory committee to all parent organizations with regard to the establishment of new programs and procedures in order to avoid duplication of effort and to create a central source of information. Represented on the committee are the American Cancer Society, the D. C Department of Health, the American College of Surgeons, the National Cancer Institute, the District of Columbia Dental Society, the Department of Health, Education, and Welfare, and the Medical Society of the District of Columbia.

Cancer Morbidity Review

With the aid of a grant from the District of Columbia Division of the American Cancer Society this Committee has done an outstanding job in studying pelvic carcinoma in this area over a 5-year period. This detailed report will be published in MEDICAL ANNALS. This report merits the attention of every practicing physician.

Central Charge Service

In response to inquiries from a number of members concerning use of the Central Charge Service for handling patients' bills, the Executive Board reviewed the program now operating in the District. It was agreed that the use of the Central Charge Service by physicians is not in the best interest of physician-patient relationships and, therefore, it was voted to not approve its use by physicians as a billing service.

Subsequently, this matter was referred to the Judicial Council of the AMA which has made the following statement of policy: "The Council looks with disfavor on the use of the service of the Central Charge-It Company and similar operations by physicians because of the implication of advertising and patient solicitation. Further, the Council does not believe that this kind of plan upholds the dignity and honor of the profession."

Committee Structure

The Society has 19 Standing Committees for which the Constitution and By-laws provides and 18 Special Committees created by the Executive Board. Some carry heavy loads while others have very little to do. To equalize work in some areas the Insurance Committee was redesignated as the Committee on the Keogh Act and Related Problems; a new Insurance Committee to handle Society-approved Life, Health and Accident programs was created; and a new Committee on Medicolegal Activities was established to consider the Society's program of Professional Liability Insurance and seek ways and means of informing members on these and related problems. The Medical Journal Committee was retitled Medical Journal Exchange Committee. A complete revision of the committee structure is needed. This problem is under study. The result with any recommendations will be presented to the Society in a supplemental report.

Composite Picture of Membership

It has been almost 10 years since the Society has had a composite picture of its members. To bring this up to date the Board has agreed to coöperate with Chase Studios in developing as complete a composite picture as possible. Every member is urged to coöperate so that we may have a new group picture for the new headquarters.

Grievance Committee

The Grievance Committee is performing a very difficult and at times unpleasant duty and is doing it in a most exemplary manner. During the first 7 months of 1963 this Committee considered complaints against 27 members of the Society. In most of these cases differences were settled to the satisfaction of both parties. The Grievance Committee after full investigation and hearings has recommended disciplinary action against 2 members of the Society. These recommendations are pending before the Executive Board at the present time. Hearings will be held and it is probable the Board will make disposition of these cases before this report appears in the ANNALS.

The principal source of complaint from patients is the fee charged. Other factors which often result in complaints are the attitude and actions of the physician, and less frequently dissatisfaction with treatment.

The Grievance Committee has asked and been assured of the Executive Board's support in using the ANNALS to point out to the membership some of the omissions and commissions in private practice that may lead to dissatisfaction and complaints on the part of the patient.

Honorariums for Out-of-town Speakers

In previous years it has not been necessary to offer honorariums to obtain the best out-of-town speakers for the ANNUAL SCIENTIFIC ASSEMBLY even though several program committees have recommended it. This year a majority agreed that times have changed and that the offering of an honorarium has become a necessity. The results of this change in policy are evident in this year's program, which includes some of the Nation's outstanding physicians.

Information and Referral Center for Older Persons

One of the problems that has concerned the Committee on Aging for several years is that of assisting physicians—and the public—in locating needed medical facilities and services for older persons. Many cities have established a central source for such information, some under Medical Society auspices. On recommendation of the Committee on Aging, it was agreed that the Committee explore the possibility and feasibility of taking the initiative to develop an information and referral center to be concerned with medical and related facilities and services for the aged in the District and Metropolitan Area and to explore possible sources of funds for financing such a project.

Mass Poliomyelitis Immunization

Last year, on recommendation by the Committee on Public Health, the Executive Board approved a mass immunization program for poliomyelitis utilizing oral vaccine. Because of the pronouncements by the Public Health Service, which questioned 1 of the 3 types to be used, this program was cancelled. Since that time the Committee on Poliomyelitis has worked with the Health Department to determine what, if any, future steps should be taken. The Committee published a report in the MEDICAL ANNALS for July 1963 outlining the situation to date. As late as August 15 of this year the "surveillance program" being carried on to determine the imminence of polio in the District has shown no need for a mass program. If and when the need does arise the membership will be notified and asked to participate.

Professional Liability Insurance

The program of Professional Liability Insurance approved by the Society and underwritten by the St. Paul Mercury Insurance Company had its inception in 1955. To date the experience has been acceptable to both the insurer and the Society. The number of members insured under this plan has grown from 284 in April 1957 to 1,043 in April 1963. Losses have been reasonable and an acceptable reserve set aside.

Late this spring the Bureau of Casualty Underwriters issued a new classification system, with 4 classes of physicians replacing the former 2 classes. Although the St. Paul Companies are not "Bureau" companies, there was no alternative to accepting this new classification. The "Bureau" companies raised their rates substantially. Our underwriter, on the other hand, raised rates for 2 of the classes and lowered rates for 2 classes so as to equalize premiums and risks and yet continue the same total premium for the group as a whole. Because our program's rates are lower than the rates of the "Bureau" companies, many members have transferred their insurance to the program approved by the Society.

We are not yet satisfied with the situation since the District's rates are much higher than those for Maryland or Virginia. Somewhere there must be an answer. The Medicolegal Committee will meet twice a year with representatives of the St. Paul Insurance Companies to review suits, claims, and losses with a view to maintaining present rates. We hope later that rates can be reduced.

Relative Value Schedule

In 1959, after several years of study, this Society adopted a Relative Value Scale patterned after similar schedules adopted by many state medical associations. At that time it was recognized that to be useful this schedule would need periodic revision. Therefore, the Executive Board has instructed the Committee on Medical Care to proceed with a revision of the present Relative Value Schedule and to report its findings and conclusions to the Board at the earliest date possible.

Since this instruction it has become evident that such a revision is essential and that to be successful the project requires the coöperation of every Section of the Society. The Grievance Committee, the Medicare Committee and the Review Board all require some base line from which to assess individual variance in fees. Medical Service of the District of Columbia too needs Society guidance if it is to retain physician support.

Review Board for Prepaid Medical Care Benefits

The Review Board was created by the Executive Board and given the unenviable task of determining the "usual and customary fee" in this area whenever Medical Service of D. C. requested such information in its application of Major Medical coverage. The number of such requests from Medical Service has been relatively small, 0.6 per cent, but each case is a controversial one. During the first 8 months of 1963 the Review Board had 80 such referrals, with 6 physicians exercising their right to appear personally and contest the Board's decision. It is evident that while numerically the Board's part in the overall Major Medical Benefits Program seems small, its work is vital to the success of the Program.

A few physicians have voiced dissatisfaction with the Major Medical Program and especially with the Review Board's actions. Much of the dissatisfaction with the Review Board has been dispelled by a change in procedure instituted by Medical Service. Now the physician is notified and given an opportunity to appear before the Board before any notification is sent to the patient.

The Review Board does not set fees. It determines "the usual and customary fee" for a given procedure under the existing circumstances and notifies Medical Service so that the latter may determine its liability under that particular contract. It is always wise for physician and patient to agree on a fee before the service is rendered. It must be borne in mind that Medical Service is not bound by such an agreement between doctor and patient but is liable only for the usual and customary fee.

The Review Board has no contact with the patient. Any contact with the patient, whether written or oral, is carried on by Medical Service. The sole function of the Review Board is to advise Medical Service as to the usual and customary fee under the circumstances stated. The Board's duties and responsibilities end there.

Representatives to Conferences

A number of members and staff officially represented the Society at various national conferences. They are:

Zigmond Lebensohn, M.D. Leon Yochelson, M.D.	Conference on Mental Health
Hugh G. Clark, M.D.—	9th National Conference on Physicians and Schools
David Davis, M.D.—	National Conference on Institutionally Acquired Infections
C. K. Fraser, M.D. Allan B. Coleman, M.D.	Greenbrier Conference on Maternal and Perinatal Mortality and Morbidity
Edward W. Nicklas, M.D. Richard Sullivan, M.D. Mr. George W. Cooley	American Medical Political Action Committee
Karl C. Corley, M.D. Edward W. Nicklas, M.D. Mr. George W. Cooley	National Legislative Conference
Mr. Warren Magee—	AMA Medical-Legal Conference
Raymond T. Holden, M.D. Willard Camalier, M.D. Edward W. Nicklas, M.D. W. LeRoy Dunn, M.D. Mr. George W. Cooley	AMA Annual Session of the House of Delegates

Many other members have represented the Society at local meetings and conferences.

Smoking, Lung Cancer and Other Diseases

Although it recognizes that there is still considerable controversy as to the relationship between cigarette smoking, lung cancer and other diseases, the Executive Board believes that every effort should be made to warn young people against the possible effects of the smoking habit. Therefore, it concurred with and approved the following resolution of the American Cancer Society as recommended by the Society's Cancer Control Committee:

> WHEREAS, The preponderance of the evidence indicates that cigarette smoking is implicated in the genesis of lung cancer and probably other diseases; and
>
> WHEREAS, The District of Columbia Medical Society is concerned in all matters relating to public health; *therefore be it*
>
> RESOLVED, That the District of Columbia Medical Society go on record as advocating the voluntary giving up of cigarette smoking by those already habituated; *and be it further*
>
> RESOLVED, That the District of Columbia Medical Society coöperate with the American Cancer Society, District of Columbia Division, in its educational program to influence young people not to start the habit of smoking cigarettes.

Student AMA

In support of the local medical schools' Student American Medical Association, the sum of $500 was allocated in support of the Regional SAMA meeting held at Howard University. In addition, $100 was allocated to help defray the expenses of 1 representative from each medical school in the District of Columbia to the national meeting of the Student AMA in Chicago.

V. D. Regulations

On recommendation of the chairmen of the Committee on Public Health, the Subcommittee on Venereal Disease, and the Section on Pathology and Laboratory Medicine, the Executive Board voted to oppose the adoption of the proposed amendments to the Venereal Disease Regulations of the D. C. Department of Public Health which would require the reporting by all public and private laboratories of all positive serologic tests for syphilis. Since available serologic tests for syphilis are not specific such reporting is not considered to be in the best interest of either the patient or the public.

Workmen's Compensation Fee Schedule

During the year the Committee on Occupational Health revised the Workmen's Compensation Fee Schedule with a view to making it more equitable. Although all revisions were upward, the Committee is not fully satisfied with the result and plans to continue its efforts to have the schedule keep pace with the rising costs of medical practice.

* * * * *

Many other matters of considerable importance to physicians and the community have been studied and discussed in the several committees and by the Executive Board, such as care for the aged, nursing homes, changes in medical licensure provisions for the District, the problem of physicians who are licensed in other states and who practice in District Hospitals, and many others. Space does not permit enumerating them.

Administration

This is the first full year for our new Executive Director, Mr. George Cooley. He has spent much time and effort studying the policies and reviewing the details of the Society's administrative organization.

A sharp drop in the amount of advertising in the ANNALS plus an increased printing cost, a MEDICAL BUREAU that has outgrown its operating staff, simplification of the bookkeeping system to eliminate duplicate entries, an improvement in the general efficiency of the Society's office are but a few of the problems which have required much of his time. These changes are but an indication of what will follow.

The Society is exceedingly fortunate in having persuaded Mr. Cooley to accept appointment as its Executive Director. To those of you who do not know Mr. Cooley, we suggest that you make a point of introducing yourself at the first opportunity.

* * * * *

It has been a pleasure as well as an honor for me to serve as an officer of the Society. With the completion of my term of office my interest in the progress of the Society and my willingness to work for it will in no way be diminished.

Respectfully submitted,
W. LeRoy Dunn, M.D.
Chairman, Executive Board

Report of the Board of Credentials

It is the task of the Board of Credentials to inquire into the qualifications of each applicant for membership. This was done for 91 applicants during the period, September 1, 1962 to September 1, 1963. Each physician was interviewed personally by the Board to assure that the data on the application were correct and complete.

This is an interesting and rewarding assignment and your Board members never fail to be impressed by the high caliber of physicians entering practice here. Seldom has there been any question concerning qualifications or professional standing.

One problem frequently arises, however, and that is the type of membership for which an applicant is eligible. This matter has been brought to the attention of the Executive Board with the hope that our types of membership can be redefined. The type of membership for which a physician is eligible should be clear, provision should be made for those who retire or are disabled, and more members should have the opportunity of participating actively in Society affairs.

In addition, it would seem of real value to enlarge the Board of Credentials to assure a more workable quorum when the absence of 1 or more members is necessary. This suggestion too has been forwarded to the Executive Board.

Finally, to increase the number of intern- and resident-members of the Medical Society, the Board of Credentials recommended to the Executive Board that staff lists be obtained from the hospitals to be used for the purpose of sending letters to the residents and interns telling them of the possibilities of membership in this Society.

It has been a pleasure to meet and visit with every new member and we are pleased to so report to the entire membership.

Respectfully submitted,
William L. Howell, M.D., *Chairman*
Luther W. Gray, M.D.
Lawrence A. Rapee, M.D.

Report of the Secretary-Treasurer

One year for some tasks is a long time, for others it is just a beginning, a start, a learning stage. For your Secretary-Treasurer it has been the latter. The year has been a challenge, with some satisfaction in tasks performed and some embarrassment in errors committed. Much of the staff effort has been devoted to Executive Board, Committee, and Assembly activities. However, management problems of staffing and of dollars and cents have required serious study and some changes in order to provide adequate personnel and yet release more funds for committee and general Society functions. This report will be concerned with some of these problems.

Membership

As noted in last year's report, the membership of this Society seems to have reached a plateau which will continue until major changes occur in the city's population. From 1943 to 1953 the number of Active members increased almost 50 per cent, while the increase from 1953 to 1963 was a little over 14 per cent.

Membership—September 1

	1943	1953	1963
Active	893	1,338	1,532
Life	59	72	65
Affiliate	—	12	39
Associate	207	411	592
Honorary	8	19	28
Resident-Intern	—	11	19
Totals	1,167	1,863	2,275

Obviously, the rapid growth of suburban Maryland and Virginia has contributed to the leveling off of the D. C. doctor population. This is shown in part by the fact that less than 15 per cent of the Active members are general physicians, a figure much lower than in other areas. Three medical schools and the large hospital centers contribute to specialization in the District, with the increasing populations of Virginia and Maryland attracting the general physicians as well as specialists.

Meetings

Discussions of the possibility of moving to a new headquarters raised the question as to the use of the present building. Actually it is used much more than many believe. During the first 6 months of 1963 there were 192 meetings in the Society's building: Committees 89, Sections 14, and Related Groups 89. However, most of the meetings were small, with the auditorium used only 28 times, mostly by related groups, such as the voluntary health agencies. Most meetings (164) were accommodated in the Library and Conference Rooms B and C.

Committee meetings were well attended, averaging well over 85 per cent of the members. Most committees (54) met at noon although a substantial number (35) preferred the evening. Since committee activity is the backbone of a Society the high attendance attests to interest of the members and to care in the selection of committee members.

Finances

Most Medical Societies are finding it difficult to keep up with increasing costs of operation, particularly in salaries. In the District of Columbia competition with the Federal Government makes this doubly difficult. Government mass purchasing here has raised costs to all organizations; too, its salary scale and fringe benefits, contrary to newspaper publicity, are above private organizations and steadily being raised.

To employ competent personnel continues to require higher salary scales; to do this on a constant income requires retrenching in other expenditures. This has been done successfully in all departments, except the Medical Bureau, where an increase in the number of personnel has required an increase in monthly rates.

The Society has continued to operate in the black over the years and will do so this year. However, the Society's reserve funds were expended a few years ago for remodeling 1710 M Street and it seems necessary to build up a substantial reserve again. The generally accepted reserve for a Medical Society is 1 year's operating expense, or between $100,000 and $150,000 for this Society. This will prove to be a slow process with the leveling off in membership the past few years, particularly when accompanied by increasing personnel costs, more requirements for services, and losses incurred in the publication of the Annals. More efficiency in personnel use through better equipment and work methods has produced some results and, it is hoped, will produce more. The Annals problem is discussed elsewhere. Anticipated budget for 1964 and expenditures for 1963 will be included in a supplemental report since the deadline for this report is too early to provide sound estimates.

Medical Annals

The economics involved in publishing the MEDICAL ANNALS has made it necessary to make some changes in its format. The size of type was reduced, the number of lines per page increased, and the number of pages placed at an even 100 or less, where feasible. These changes, which cut costs substantially, were necessary because of an increase in printing costs, January 1961, of about 30 per cent and a reduction in advertising revenue from the national accounts. In 1959 income exceeded costs by $1,500, while in 1962 costs exceeded income by $20,000.

The ANNALS should not be expected to make a profit or even pay for itself. However, neither should it require 20 per cent of the dues' income as a subsidy. It is generally expected that such publications should be maintained on a $2.50 to $5.00 per member allocation from dues. This is the goal being sought without any lessening in the quality of the scientific material or in the general format.

Medical Bureau

Although the number of complaints from BUREAU members are few, it became obvious earlier in the year that the call-load was too great for the operators to handle efficiently. Therefore, studies were requested by the Medical Bureau Committee to determine the best solution. With the assistance of the Telephone Company several studies were made.

Comparison of Call-load 1953–1957–1963

	1953	1957	1963	Approx. increase/ decrease (per cent) 1953-1963
Patient Calls for Doctors	163,803	229,000	320,000	+100
To Reach Doctors	131,548	185,000	260,000	+100
Emergency Calls	6,142	5,000	2,800	−50
Emergency Calls —Bureau Members	7,095	6,000	4,500	−37
Instruction Calls	118,306	162,000	204,000	+73
Referrals	19,124	28,000	31,000	+63
TOTAL CALLS	446,018	615,000	822,300	+85
Subscribers	745	762	773	+4
Operators—Regular	16	21	24	
Operators—Relief	9	6	6	
	25	27	30	+20

These data alone indicate why the operators were sometimes slow in answering calls. Yet the 822,300 calls are only those on which records are made; it is estimated that for every 4 calls received and recorded, 3 calls are received which are not recorded.

As a result of this study and studies of calls by position by day and by hour of the day it was agreed that 5 additional operators (2 full-time and 3 part-time) were needed to assure reasonable service. The Bureau Committee, the Finance Committee, and the Executive Board agreed to this together with the necessary increase in rates to meet the costs.

Medical Service and Group Hospitalization

One of the benefits obtained by Society members is eligibility for enrollment in Medical Service of the District of Columbia and Group Hospitalization, Inc. on a group basis. This provides a substantial saving to physicians and their families. Therefore, it is no surprise to find that for the September enrollment 1,369 members will be participating. This is a gain of 142 over September 1960. Since the savings are substantial it is assumed that the remainder of the Active and Life members have joined other groups through which they are eligible.

AMA Membership

Membership in the American Medical Association is optional to D. C. Society members. The number of delegates to the AMA House of Delegates depends upon the number of members who join. Each year the Society just barely passes the 1,000 mark necessary to retain 2 delegates. This year about 1,200 of the 1,597 Active and Life members are certified to AMA as of September 1. It is suggested that a drive is needed to get more members to join AMA and perhaps to get more local physicians into the Society.

A Word of Appreciation

Coming to a Society which has had a long history of committee activity has presented many problems of just knowing what has happened in the past. Without exception every committee chairman and member has been patient and helpful. So to all of you on committees, may I extend a word of appreciation.

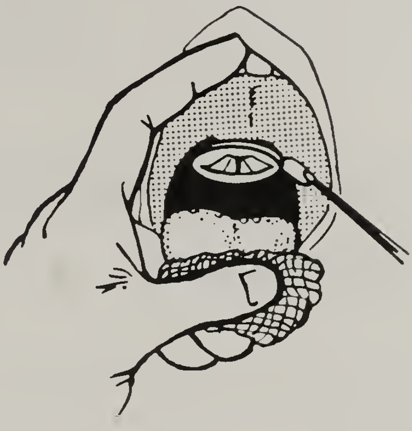
Respectfully submitted,
GEORGE W. COOLEY
Secretary-Treasurer

HEAD AND NECK EXAMINATION

① Inspect the head and neck area, especially the skin and lips

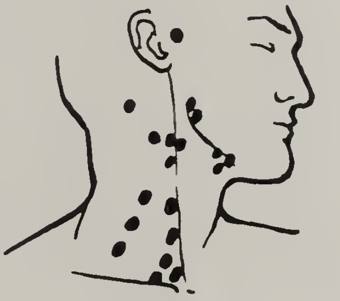
② Inspect the oral cavity

③ Palpate the oral cavity

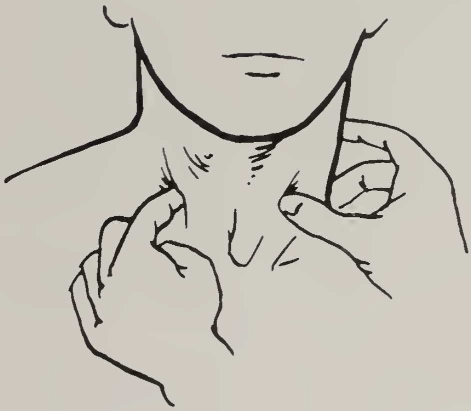


④ Visualize the larynx and surrounding areas

⑤ Palpate node-bearing areas

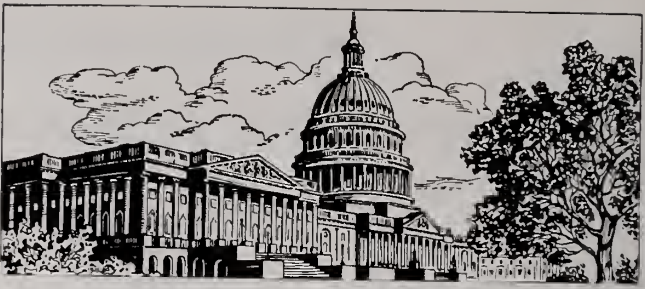


⑥ Palpate the thyroid gland



RESEARCH
EDUCATION
SERVICE

The monogragh, "Oral Cancer" is available upon request.
Call or Write
AMERICAN CANCER SOCIETY
District of Columbia Division, Inc.
810-18th Street, N.W.
Washington 6, D.C.
EXecutive 3-3690



NEWS & PERSONALS

Meetings

The American College of Chest Physicians will present a Postgraduate Course on Recent Advances in the Diagnosis and Treatment of Diseases of the Heart and Lungs at the International Inn, Washington, October 14–18. The registration fee for members of the College is $75.00, and for non-members, $100.

The Committee for the Postgraduate Course is chairmanned by Dr. Joseph W. Peabody, Jr.; co-chairmen are Drs. Sol Katz, Thomas W. Mattingly, and Bernard J. Walsh. Serving on their Committee are Drs. Brian Blades, Charles A. Hufnagel, Roy G. Klepser, and John W. Trenis, of Washington; Dr. Otto C. Brantigan, of Baltimore; Captain Robert O. Canada, of the National Naval Medical Center; and Dr. George R. Maxwell, of Morgantown, West Va. Dr. J. Winthrop Peabody, Sr., Chairman of the national Council on Postgraduate Medical Education, is serving the local committee in an advisory capacity.

The members of the Committee are among the faculty for the course, which numbers 70, a third of them members of the District Medical Society. Instructors also include out-of-town speakers and personnel from the U. S. Naval Hospital, the Walter Reed General Hospital, Veterans Administration, and the National Institutes of Health.

The District IV Meeting of the American College of Obstetrics and Gynecology is sponsoring a dual program, one for physicians and one for nurses, November 7, 8, and 9, at the Shoreham Hotel.

For physicians, registration will open at 4 p.m., Thursday, November 7. On Friday, November 8, Dr. Robert H. Barter, Chairman of District IV, will welcome the registrants. Presiding at the opening scientific session will be Dr. James A. Dusbabek, who is in charge of the scientific program for obstetricians and gynecologists.

The first day will feature a luncheon in honor of Dr. George Judd, President of the American College of Obstetricians and Gynecologists.

Dr. Roy T. Parker, Professor of Obstetrics and Gynecology at Duke University, will moderate a Panel Discussion on Urinary Incontinence on Friday afternoon. Panelists will be Dr. Judd; Dr. Andrew A. Marchetti, of Georgetown University; Dr. Richard W. TeLinde, of Johns Hopkins University; and Dr. Sprague H. Gardiner, of the University of Indiana.

Friday evening will be highlighted with a cocktail party and dinner, when Mr. Marvin L. Kalb, of CBS News, will talk on "The Present State of East-West Relations."

On Saturday morning the Annual Business Meeting will follow the morning intermission.

Registration for nurses will open at 4 p.m., Wednesday, November 6. Their program will begin Thursday morning at 9 a.m. with a welcome by Dr. Barter and an introduction from Dr. James C. Walsh, Program Chairman for this meeting. Other members of the Medical Society who will chairman the sessions for nurses are Drs. Raymond T. Holden, Samuel M. Dodek, and Morton S. Kaufman. The final session will be on Saturday morning with a full morning program scheduled.

The First Annual John Hugh Lyons Memorial Lecture will be presented in the auditorium of the Washington Hospital Center, Wednesday, November 13, 1963, at 8 p.m. The guest speaker will be Dr. Michael E. DeBakey, Professor and Chairman of the Department of Surgery, Baylor University School of Medicine; his subject, "The Immediate and Late Results of Surgery for Arterial Disease."

Dr. DeBakey plans to spend the entire day at the Washington Hospital Center, participating in Grand Medical Rounds at noon; he will also participate in Rounds with the medical and surgical house staffs.

All members of the District Medical Society are invited to attend the Lecture and Rounds. Dr. Harold Hawfield is in charge of arrangements.

The Annual Business Meeting of the Medical Society of the District of Columbia has been called for November 12, 1963, to be held in the Medical Society's auditorium. This issue of the MEDICAL ANNALS contains the annual reports of the Chairman of the Executive Board, the Secretary-Treasurer of the Society, and the Board of Credentials. This is the meeting when new officers are elected for the coming year. A good attendance is anticipated.

The Section on Ophthalmology and Otolaryngology of the Southern Medical Association will hold its Annual Meeting in New Orleans, La., November 18, 19, and 20, concurrently with the Annual Meeting of the parent Association.

Dr. Dan G. Albert, of Washington, will present a paper before the Section, November 19, on "Vertical Strabismus and Its Management." Dr. John W. McTigue, also of Washington, will deliver a paper, November 20, entitled "Reformation of the Anterior Chamber with Polyvinylpyrrolidone (PVP)," and will participate in a Panel Discussion on Surgery of Anterior Segment of the Eye the same day.

General News

The American Medical Association has issued a **call for papers, scientific exhibits and motion pictures** for presentation at its 113th Annual Meeting in San Francisco, June 21–25, 1964. Those who desire to present scientific papers before the Sections of the Scientific Assembly should communicate with the Secretary of the appropriate Section well in advance of the deadline date, December 15, 1963. The Secretaries and their addresses are listed in the *Journal of the AMA* in the last issue of every month.

For space in the Scientific Exhibit applicants should request forms from the Director, Scientific Exhibit, Department of Scientific Assembly, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois. For the presentation of motion pictures, application forms should be obtained from the Director, Medical Motion Pictures and Television, Department of Scientific Assembly of the AMA. The deadline date for receipt of these applications is January 10, 1964, but requests should be made as early as possible.

The American Thoracic Society, Medical Section of the National Tuberculosis Association, announces that applications for research grants will be received between now and December 15, 1963. Grants will be awarded for medical and social research in the field of respiratory diseases, including tuberculosis, for the year beginning July 1, 1964. Further information and forms may be secured from the Division of Research and Statistics, American Thoracic Society, 1790 Broadway, New York 19, N. Y.

A new wing for cardiac surgery and neurosurgery was dedicated at the **Clinical Center of the National Institutes of Health,** Bethesda, Md., September 5.

The new, circular addition to the Clinical Center was built at a cost of $2 million and is 4 stories in height. It provides separate suites for heart surgery and neurosurgery. The major innovations consist of comprehensive electronic monitoring and recording systems and advanced methods of air hygiene.

In special observation rooms, the viewer hears discussions by operating personnel through his headset, has access to physiologic information directly from the display board, and employs binoculars to see closely the details of surgical technique. He is as nearly a part of the procedures as it is possible for him to be without actually taking a place at the operating table.

Children's Hospital has received a check for $6,000 from the Gerber Products Company for the Pediatric Allergy Fellowship for the academic year 1963–64. Dr. Richard H. Todd, Co-chief of the Allergy Section of the Research Foundation of Children's Hospital, accepted the check from Mr. Edward A. Chaumont of the Professional Services Department of Gerber Products. For the past 7 years the Allergy Fellowship program has received support from this company.

The Eye Research Foundation of Bethesda has opened a new research and rehabilitation center at 8710 Old Georgetown Road. The Foundation, which was established in 1957, previously occupied quarters at 4806 Rugby Avenue. It has been supported by private funds and study grants from the National Institutes of Health and the Office of Naval Research.

The Foundation plans to coöperate with the Goodwill Industries of America in a pilot program in occupational rehabilitation for the partially blind. Future projects also include the establishment of an eye bank for corneal transplants and the operation of an optical aids clinic in collaboration with the Maryland State Office of Rehabilitation.

Dr. William M. Hart is President of the Foundation. Dr. Harvey H. Ammerman is one of the trustees.

The Washington Academy of Surgery held its annual business meeting, May 13, and elected the following officers:

Dr. Philip A. Caulfield, *President*: Dr. Duane C. Richtmeyer, *Vice President*: Dr. J. Rogers Young, *Secretary-Treasurer*: and Dr. Roy G. Klepser, *Assistant Secretary-Treasurer*.

Meetings of the Academy are scheduled for October 14 and December 9, 1963; February 10, April 13, and May 11, 1964.

The following officers of the **Washington Orthopedic Club** were elected for 1963–64:

Dr. Allan M. McKelvie, *President*; Dr. Herbert E. Lane, *Vice President*; and Dr. Charles Keck, *Secretary-Treasurer*.

Rear Admiral George G. Burkley, MC, USN, has been appointed Physician to the President. He has been Assistant White House Physician since February 1, 1961.

Dr. Burkley, a former commander of the Naval Dispensary in Washington, received his medical degree from the University of Pittsburgh in 1928. After graduate study at the Mayo Clinic, Rochester, Minn., he returned to the University of Pittsburgh as Assistant Professor of Medicine. He joined the Naval Medical Corps in 1941.

Dr. Shirley Carter Fisk, of New York City, has been named **Deputy Assistant Secretary of Defense (Health and Medical)** by Secretary of Defense McNamara, effective June 1. He succeeds Dr. Frank B. Berry, who will remain in a consultant status for the present.

Dr. Fisk graduated from the College of Physicians and Surgeons, Columbia University, in 1935. He was commissioned a Captain in the Army Medical Reserve in 1941, and served on the staff of the 23rd Station Hospital, an affiliate of Columbia Presbyterian General Hospital No. 2, from June 1942 to June 1945. He attained the rank of Major.

Before his new assignment Dr. Fisk was Associate Clinical Professor of Medicine at the College of Physicians and Surgeons. He is a diplomate of the American Board of Internal Medicine.

Colonel Donald Campbell, MC, USA, has been appointed Executive Officer of Walter Reed General Hospital. He will also serve as Chief of Professional Services and Director of Graduate Education for the Hospital.

Colonel Campbell, a graduate of Cornell University Medical College, is Board-certified in both General Surgery and Thoracic Surgery.

Personals

Dr. W. Montague Cobb, distinguished medical educator and scientist, was elected President-elect of the National Medical Association at its 68th Annual Convention in Los Angeles, to take office in August 1964.

Dr. Cobb adds this office to his many attainments throughout a long professional career in the Washington area. A graduate of Howard University College of Medicine, he has been a member of its faculty since 1932 and is presently Professor and Chairman of the Department of Anatomy.

From 1945 to 1947, and from 1954 to 1956, he was President of the Medico-Chirurgical Society of the District of Columbia and in 1952 received its Distinguished Service Award. In 1953 he was appointed to the Public Health Advisory Council of the District of Columbia and served as its Chairman from 1956 to 1958. He was reappointed to the Council in 1958 for another 3 years. He is Past President of the American Association of Physical Anthropologists and a member of numerous other scientific organizations, in many of which he has held office.

He has been Editor of the *Journal of the National Medical Association* since 1949. In 1955 he received the Distinguished Service Medal from the NMA in recognition of his services as Editor of its *Journal*, for his teaching abilities, and for his numerous contributions to the medical literature, particularly in the fields of anatomy and

W. MONTAGUE COBB, M.D., President-elect of the National Medical Association.

physical anthropology. For these accomplishments he was also awarded the honorary degree, Doctor of Science, by Amherst College, where he took his undergraduate work. Dr. Cobb has been a Consulting Editor to the Medical Annals since 1957.

Dr. William P. Herbst, Jr. received a Meritorious Public Service Award, July 19, 1963, from Commissioner Duncan in his offices at the District Building. He was cited for "his outstanding interest, public-spirited service, and untiring devotion to the welfare of the community and to the Government of the District of Columbia, while serving as a member of the Hospital Advisory Council since its establishment on April 8, 1947, and while serving uninterruptedly since 1933 as a member of the visiting staff of Gallinger Hospital, now D. C. General Hospital." The citation concluded with an expression of appreciation for his "generous contribution of time, exceptional ability, and advice and guidance in deliberations of the Council."

Dr. Roy E. Ritts, Jr., Professor of Microbiology at Georgetown University School of Medicine, has been appointed Assistant Director of the Division of Scientific Activities of the American Medical Association, which is under the direction of Dr. Hugh H. Hussey.

Dr. Ritts, a graduate of George Washington University School of Medicine, was named Chairman of the Department of Microbiology at Georgetown University 4 years ago and was elevated to full professorship in 1961. He has also served as consultant in clinical pathology to the Clinical Center of NIH, lecturer in microbiology at the U. S. Navy Dental School, and consultant in immunology to the Department of Medicine of the U. S. Naval Hospital.

Dr. Ritts will work with Dr. Hussey in all phases of the Division's activities, including plans for the establishment of the AMA's new Institute for Biomedical Research, which was announced initially at the AMA meeting in June and is scheduled to be opened at the AMA Headquarters next year.

Dr. Peter Comanduras has resigned as Assistant Executive Director of CARE in charge of MEDICO, effective September 1, and has returned to private practice.

Dr. Comanduras and the late Dr. Tom Dooley founded MEDICO in 1958. The agency now directs 9 different programs in 12 countries. He has been succeeded by Dr. Earl N. Hillstrom, of Reno, Nevada, who has served as a medical consultant to CARE for the past 7 years.

Dr. Ernest W. Lowe has been elected to Fellowship in the American College of Obstetricians and Gynecologists.

Letters to the Editor

Poliomyelitis Immunization Program

To Dr. William S. Anderson,
Chairman, Poliomyelitis Committee,
D. C. Medical Society:

I read with considerable interest your editorial in the recent issue [July] of the Medical Annals.

I believe it clearly places on record your views concerning the problem of immunization against poliomyelitis and does clarify the stand of the Committee on Poliomyelitis of the D. C. Medical Society. Certainly, this whole matter has been one of considerable confusion and I believe that your statement should be of real assistance to physicians in clarifying the matter in their minds.

Very sincerely,
Murray Grant, M.D., D.P.H.
Director of Public Health,
District of Columbia

Books Received

Acknowledgment is made of the following books which have recently been received.

Cecil-Loeb Textbook of Medicine, 11th ed. Edited by PAUL B. BEESON, M.D., WALSH McDERMOTT, M.D., and 5 Associate Editors. Price, single volume, $19.50; $23.50, 2-volume set. Pp. 1835, illustrated. Philadelphia: Saunders, 1963.

Medical Department, United States Army: Preventive Medicine in World War II. Communicable Diseases, Volume VI: Malaria. COLONEL JOHN BOYD COATES, JR., M.C., Editor-in-Chief; EBBE CURTIS HOFF, Ph.D., M.D., Editor for Preventive Medicine, and PHEBE M. HOFF, M.A., Assistant Editor. Prepared and published under the direction of LIEUTENANT GENERAL LEONARD D. HEATON, The Surgeon General, United States Army. Price, $6.25. Pp. 642, illustrated. Washington 25, D. C.: Superintendent of Documents, U. S. Government Printing Office, 1963.

Medical Department, United States Army: Organization and Administration in World War II by BLANCHE B. ARMFIELD, M.A.; COLONEL JOHN BOYD COATES, JR., M.C., Editor-in-Chief; CHARLES M. WILTSE, PH.D., LITT. D., Editor for Organization and Administration. Prepared and published under the direction of LIEUTENANT GENERAL LEONARD D. HEATON, The Surgeon General, United States Army. Price, $6.25. Pp. 613, with 123 illustrations. Washington 25, D. C.: Superintendent of Documents, U. S. Government Printing Office, 1963.

Medical Mycology. CHESTER W. EMMONS, Ph.D., CHAPMAN H. BINFORD, A.B., M.D., AND JOHN P. UTZ, M.D. Price, $14.00. Pp. 380, with 388 illustrations on 112 figures and 2 colored plates. Philadelphia: Lea & Febiger, 1963.

Diseases of the Chest, 2nd ed. H. CORWIN HINSHAW, M.D., Ph.D., D.Sc., AND L. HENRY GARLAND, M.B., B.Ch., M.D. Price, $20.00. Pp. 798, with 743 illustrations on 308 figures. Philadelphia: Saunders, 1963.

Hernia. AMOS R. KOONTZ, A.B., B.S., A.M., M.D., D.Sc. (Hon.), F.A.C.S. Price, $11.95. Pp. 227, with 98 illustrations. New York: Appleton-Century-Crofts, 1963.

Clinical Examinations in Neurology, 2nd ed. Members of the Sections of Neurology and Section of Physiology, Mayo Clinic and Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, Rochester, Minnesota. Price, $8.50. Pp. 396, illustrated. Philadelphia: Saunders, 1963.

Pediatric Cardiology, 2nd ed. ALEXANDER S. NADAS, M.D., F.A.A.P. Price, $16.00. Pp. 828, with 527 illustrations. Philadelphia: Saunders, 1963.

Results of Surgery for Peptic Ulcer. A Coöperative Study by Twelve Veterans Administration Hospitals. Edited by R. W. POSTLETHWAIT, M.D. JAMES C. THOROUGHMAN, M.D., Associate Editor. Nine Collaborators. Price, $8.00. Pp. 308, illustrated. Philadelphia: Saunders, 1963.

Synopsis of Ear, Nose, and Throat Diseases, 2nd ed. ROBERT E. RYAN, B.S., M.D., M.S. (ALR), F.A.C.S., WILLIAM C. THORNELL, A.B., B.M., M.D., M.S. (ALR), F.A.C.S., AND HANS VON LEDEN, M.D., F.A.C.S., F.I.C.S. Price, $7.50. Pp. 425, illustrated. St. Louis: Mosby, 1963.

Handbook of the Practice of Anesthesia. JOHN R. S. SHIELDS, M.B., Ch.B., F.F.A.R.C.S. Price, $6.85. Pp. 203, illustrated. St. Louis: Mosby, 1963.

Granuloma of Rectosigmoid—Kehoe

(Continued from page 407)

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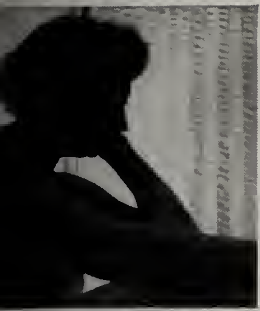
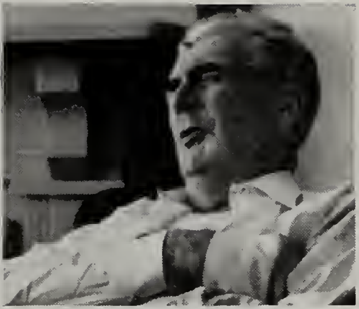


The insomniac

The tense, nervous patient



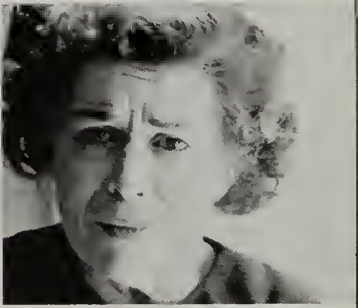
The heart-disease patient

The surgical patient

girl with dermatosis

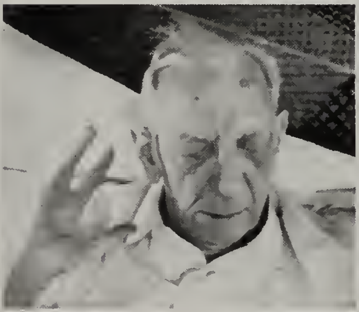
Tension headache

The woman in menopause



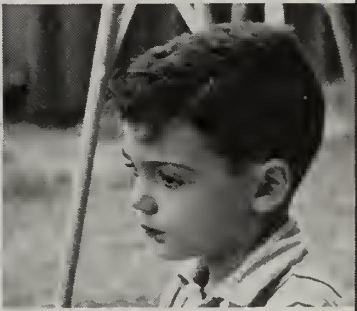
Anxious depression

menstrual tension



The agitated senile patient

The alcoholic



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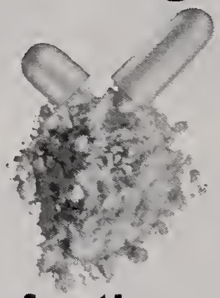

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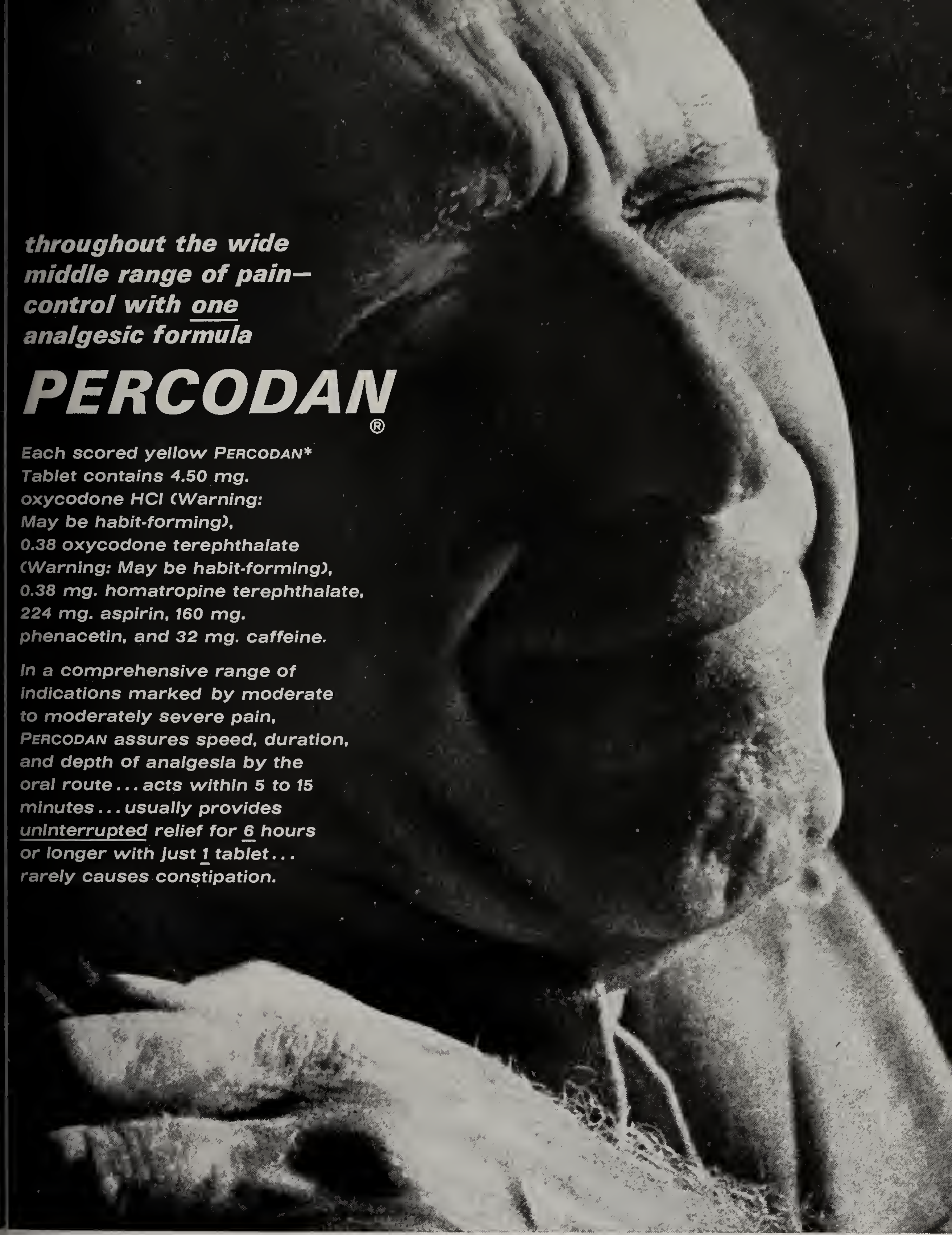

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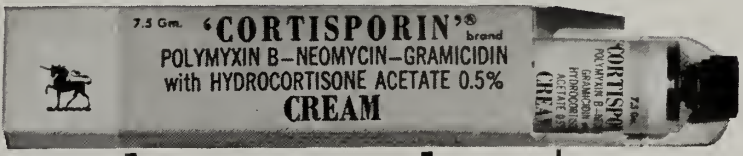
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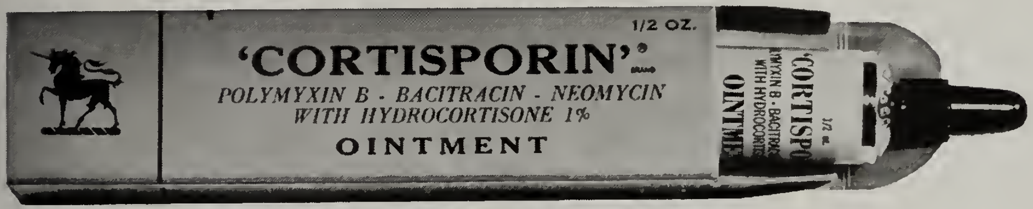
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BOOK REVIEWS

Medical Department, United States Army: Internal Medicine in World War II. Infectious Diseases, Volume II. Colonel John Boyd Coates, Jr., M.C., Editor-in-Chief; W. Paul Havens, Jr., M.D., Editor for Internal Medicine. Prepared and published under the direction of Lieutenant General Leonard D. Heaton, The Surgeon General, United States Army. Price, $6.75. Pp. 649, illustrated. Washington 25, D. C.: Superintendent of Documents, U. S. Government Printing Office, 1963.

This volume is one of a series relating the history of the United States Army Medical Department in World War II. It deals with some of the infectious diseases encountered in a global war and would apply equally to groups of any area today. Its contents are the record of personal experiences of present and former knowledgeable and distinguished medical officers. One of the well known contributors is Dr. Worth B. Daniels of the Medical Society of the District of Columbia. He wrote a chapter on Meningococcal Infections and also a chapter on a new disease entity designated as Fort Bragg Fever.

This volume deals with some well known illnesses, such as: Acute and Respiratory Diseases, Rheumatic Fever, Diphtheria, Tuberculosis, Malaria, Meningococcal Infections, Venereal Diseases and Neurotropic Virus Diseases. Some less well known conditions are also dealt with, such as: Sandfly Fever, Dengue, Q Fever, Scrub Typhus and other Typhus Fevers. The authors treat the subjects generally by beginning with an historical note, incidences during World War II, pathology, symptoms (often including an illustrative case report or 2), clinical course, complications, diagnostic procedures and treatment. Even though much of the material was prepared some years ago, it is thoroughly up-to-date. As more travelers move from the Temperate Zone to the Tropics and vice versa, thus creating greater risks of importing tropical diseases to Temperate climates physicians need often to consider tropical diseases in differential diagnoses. The value of this book, therefore, is in its comprehensive coverage. It is valuable too in that it clearly and effectively describes organized preventive medicine. It is indeed a valuable reference for any medical bookshelf.

John R. Pate M.D.

Handbook of Psychiatric Treatment in Medical Practice. Nathan S. Kline, M.D., F.A.C.P., and Heinz Lehmann, M.D. Price, $3.50. Pp. 124. Philadelphia: Saunders, 1962.

This book offers an outline of the newer concepts of psychiatric treatment, with emphasis on psychiatry as developed in the past 12 years. It is a manual for medical practitioners which removes the belief that everybody requires psychotherapy for their emotional disturbances, and that it can only be given by a trained psychiatrist in most cases. There is a heavier emphasis on psychiatric first-aid.

The presentation is clear and without the usual "jargon" seen in many books on psychiatry. The style is in question-and-answer form. The questions are those that have troubled each medical practitioner and the answers are informed, terse and understandable.

For general physicians confronted with the daily-type psychiatric difficulties of their patients this book is sufficient to bring their previous knowledge up to date, or to act as a foundation for reading the more complex textbooks available.

The author's experience with drug therapy is well revealed in the useful listing of drugs and their suggested dosages.

This is a practical book.

Peter A. Santucci, M.D.

An Atlas of Hemodynamics of the Cardiovascular System. Howard L. Moscovitz, M.D., Ephraim Donoso, M.D., Ira J. Gelb, M.D., and Robert J. Wilder, M.D. Price, $11.75. Pp. 277. New York: Grune & Stratton, 1963.

It would have been desirable if such an Atlas contained a wide variety of pictorial displays of hemodynamic problems. The coverage, however, was uneven. For example, the section on Congenital Heart Disease contained only 3 lesions. Two of these, namely atrial septal defect and ventricular septal defect, were principally treated from an angiocardiographic point of view, which is generally not used in their laboratory diagnosis. Patent Ductus Arteriosus was also treated in detail, particularly from the angiocardiographic point of view, when in actual fact patients with patent ductus are generally not catheterized at all. There was a major section on the Fourth Heart Sound with more space devoted to this single topic than to the entire section on Recording Techniques, which was fundamental to the whole volume.

Even in long sections there were some omissions. Despite detailed discussions of Mitral Stenosis and Incompetence, there was no good illustration of the characteristic left atrial pressure pulse. Three chapters were devoted to Experimental Mitral Stenosis in the Dog, when pictorial displays from human material would have been more pertinent. The phonocardiographic displays were taken from cathode ray oscilloscope tracings which were technically poor.

Many of the topics were superficially treated. For example, the section on Technique of Recording, which is of such importance, was given only 3 brief pages. The sections on Pulmonic Stenosis and on Fallot's Tetralogy were very superficially treated. Considering the available material in human subjects, reliance on experimental techniques in dogs for the simulation of these hemodynamic problems was much too heavy. The

(Continued on page 46)

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Book Reviews

(Continued from page 42)

section on Coronary Artery Disease, on Pulmonary Hypertension, on Pulmonary Incompetence, on Tricuspid Incompetence, on Tricuspid Stenosis, and others were all derived from animal experiments.

The bibliography was, however, of value.

It is difficult to see at what level this volume would be appealing. It is not detailed enough for the investigator or the personnel actively engaged in this work. At the same time the coverage is not broad enough to serve as a reference for those who need general information.

Joseph K. Perloff, M.D.

Clinical Gastroenterology, 2nd ed. Eddy D. Palmer, M.S., M.D., F.A.C.P. Price, $22.50. Pp. 706, with 255 illustrations. New York: Hoeber (Harper & Row), 1963.

Dr. Palmer has written a very readable book on gastroenterology. It is intended to be strictly clinical and thus very little of an experimental nature has been presented. Although pleasant reading, his discussions are concise and present a large volume of factual material; words are not wasted.

The book is composed mainly of descriptions of diagnostic tests and of gastroenterologic conditions and their background. These are well and clearly presented. Very little differential diagnosis has been included, unfortunately.

Dr. Palmer's approach to the treatment of uncomplicated peptic ulcer is interesting. This consists almost entirely of interview therapy, to the exclusion of pharmacologic and dietary methods. Physicians treating ulcers—generalists, internists, or gastroenterologists—realize that "treatment must be directed at the whole patient" and do so with indicated psychotherapy, drugs, and diet. The author omits his reasons for excluding drugs and diet and does not present results of this limited mode of therapy. His recommendations for treatment of the irritable colon are essentially similar.

In spite of the above, this book can be highly recommended as an easily read volume containing a great deal of worthwhile information.

Abraham W. Danish, M.D.

Obstetrics and Gynecology, 2nd ed. J. Robert Willson, M.D., Clayton T. Beecham, M.D., and Elsie Reid Carrington, M.D. Price, $13.75. Pp. 738, with 333 illustrations. St. Louis: Mosby, 1963.

The authors have prepared a textbook specifically for medical students, but within its pages the practitioner and the specialist will find a review of Obstetrics and Gynecology that is stimulating, informative, and a little controversial in part.

The material concerning maternal and fetal physiology, endocrinology and pathology is satisfactory and well documented. The chapter entitled "The Clinical Uses of Sex Hormones in Gynecology" is comparative and concise with a soft-sell technique that spells out the author's preferences. Discussion of placental circulation, function and transfer is terse, sound and erudite with no redundancy to cause the reader's mind to wander. The field of genetics gets furrowed but not so deeply that the student gets bogged down.

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All of the above information as presented by the authors has been conjoined to its related subject in a manner conducive to a fuller understanding of that subject. Nowhere is the imagination allowed to predominate over reason. And this happy combination is followed throughout the book with all the chapter subjects fitting neatly into a compilation that produces the whole female from beginning to end.

The chapters devoted to the operative techniques of low forceps delivery, episiotomy, and breech delivery are so well illustrated that the average eager-beaver type student may well come to disdain the normal delivery. However, the author, to his credit, does offer the sage advice that the complete breech delivery is not for the amateur but strictly for the professional expert.

The author's views on "Cesarean Section" (and I was gratified that he did not use the Roman "ae" in cesarean) are conventional and conservative. This is good for students because there is a tendency for students, who become interns and residents in the normal course of events, to be inclined to be too quick with the knife in solving their complications of labor. The indications for cesareans are well defined, and there is no equivocation in the author's mind concerning the doing of repeat sections. However, he does elaborate, later in the chapter, why he believes in repeat sections. This attempt to rationalize his belief is due, in all probability, to the influence of Williams and/or DeLee on his impressionable young student mind years ago.

The author suggests tubal ligation after the third cesarean "if the patient and her husband suggest it." Why not suggest it to the patient?

"Preoperative Evaluation and Preparation, and Postoperative Care" was a good chapter both for the student and for the operator—one to learn the importance of simple values and the other to be reminded not to be too blasé about the importance of evaluating the preoperative patient.

(Continued on page 49)

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Book Reviews

(*Continued from page 46*)

One of the more stimulating chapters was the author's "The Menopause and the Climacteric." The material in the subchapters on pelvic changes, general body changes, and symptoms of the climacteric patient would be shattering to the ego and morale of every red-blooded average female approaching the twilight of her life and the dawn of her menopause if she knew what was coming! Happily and luckily for her, the author has the ready remedy, which he discusses with intellectual honesty and rabid fervor in his subchapter entitled "Treatment of the Climacteric Patient." I believe with him that there are too many castrated, middle-aged females shuffling through life with a fat hump on their backs, atherosclerosis, osteoporosis, arthralgia, diabetes, atrophic vaginitis, pruritis vulvae, dyspareunia, and loss of libido. And of course he includes the hot flushes, the headaches, dizziness—symptoms that bring these poor unfortunate women to the doctor. Keep the women young forever! I'm with you, Drs. Willson, Beecham and Carrington.

J. EARL KADAN, M.D.

Ciba Foundation Symposium: Bilharziasis, held in commemoration of Theodor Maximilian Bilharz. Edited by G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., M.R.C.P., AND MAEVE O'CONNOR, B.A. Price, $11.50. Pp. 433, with 46 illustrations. Boston: Little, 1962.

The Ciba Foundation of London has again produced a magnificent book in its series of General Symposia. This one purports to encompass the field of Bilharziasis or Schistosomiasis. The book recounts the topics and discussions of a conference held, fittingly enough, on the centenary of the death of Theodor Maximilian Bilharz, and properly enough in Cairo, Egypt, where Bilharz discovered the parasite responsible for the disease later named after him. For this reason the disease is more commonly known as bilharziasis in Egypt and Britain, yet in other parts of the world it is known as schistosomiasis.

Bilharziasis is without doubt the most prevalent disease in the world today; 150,000,000 people are known to harbour the parasite. In Egypt alone the incidence is said to be 50 per cent of the population. It is also probably the oldest disease known to man. Sections of kidneys from mummies dating 2000 to 2500 B.C. have shown the ova of *Schistosoma hematobium.* That the disease still persists is a monument to human indifference and indiscrimination with their excreta. The reason for this apathy is that the disease is insidious in endemic areas. Acute cases such as we saw during World War II and which were dependent on a nonimmune invading population are not seen in endemic areas.

Large sums of money are spent to eradicate malaria (and it is being done) because of its dramatic onset with chills, etc. The mosquito is a moving target and has developed resistance to DDT and Dieldren. The snail, the intermediate host of bilharziasis, is slow moving and has not as yet developed any resistance to molluscacides, but the disease endures.

The Ciba Symposium was attended by 26 world authorities. The discussions begin with the epidemiology of bilharziasis, the ecology of its intermediate hosts and the parasites. There are excellent and detailed sections on the physiology of the Schistosoma, clinical and pathologic aspects of bilharziasis, and current immunologic studies and the accepted chemotherapy. There is a fascinating and absorbing discussion on the role of mammals as reservoir of infection. This was brought to the fore by my good friend G. S. Nelson in Tanganyika where he found baboons infected with human Schistosoma. Dr. Nelson's work has started a veritable scrutiny of the fauna in the different countries to determine the part it plays as a reservoir for human infection.

Although bilharziasis is not endemic in the U.S.A., many cases are here from Puerto Rico and other Latin American countries awaiting diagnosis. Increase in travel has also accelerated exposure of Americans and brought to these shores many chronic cases. The next patient with hematuria you see could well have bilharziasis. Cancer of the bladder and bowel is more prevalent in those infected with this disease than in the noninfected population. Carcinogens have yet to be identified. Although specialized training in this field may be necessary to make the diagnosis, immunologic methods are fully discussed in this book and also the efforts being made by different investigators to facilitate diagnosis for the general medical man. Treatment is fully discussed and the advantages of spaced treatment emphasized. More research is needed in this field as well as in the search for non-antimony compounds.

The epidemiologists, parasitologists, entomologists, and physicians have not made much progress in the control and treatment of this disease. The sanitary engineer should be given a chance, for with proper disposal of human excreta the disease could not long survive.

Perhaps the most novel effort (not in time for this book) should also be subsidized. Professor Clifford O. Berg, a Cornell entomologist, has found that the helpless looking, limbless larvae of a family of mash fly, the sciomysidae, to be among the most vicious killers in the animal kingdom, and all of them show predilection for snails. The possibility of this larvae being used as a molluscacide is intriguing and no doubt will soon be tried in the field.

This book is, I am afraid, "caviar to the general," but no doubt future MEDICO volunteers and Peace Corps commandos will find it of value. It should be a welcome addition to most medical school libraries and thus made available to medical students and interns who should be interested, although most are not, in this most prevalent of all diseases.

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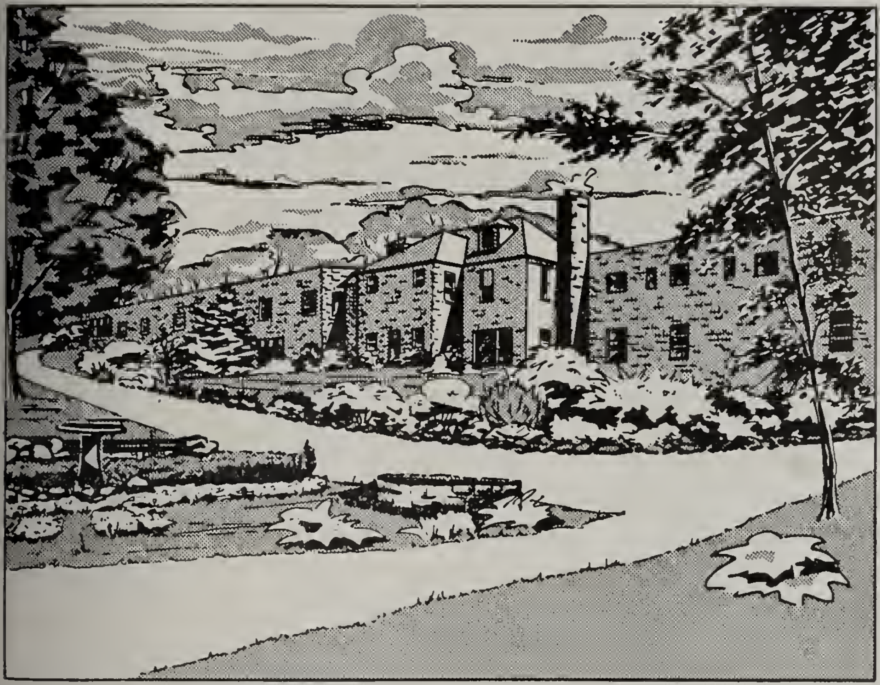

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Advertisements under the following headings are charged at the rate of $5.00 for one insertion of 50 words or less; $4.00 each for three insertions; and $3.00 each for six insertions or more. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

Classified advertisements of a professional nature are free to members.

SITUATIONS WANTED

OB-GYN, Board-eligible, desires part-time work, evening or weekend, in office, clinic or hospital. Telephone 578-0077.

INTERNIST, age 33, Board-eligible, military obligation completed, desires association with other internist or group. Address Box 67, 1718 M Street, N.W. (20036).

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PHYSICIAN licensed in D. C. for part-time work as school health physician in D. C. Department of Public Health. Telephone National 8-6000, ext. 2125 or apply Room 6024, Municipal Center, 300 Indiana Avenue, N.W.

OPHTHALMOLOGIST, Board-certified, desires associate in diversified general and industrial eye practice including surgery. Board-certified or eligible; Washington, D. C. license. $20,000 to $25,000 year to start depending upon industriousness and qualifications. Address P. O. Box 19171, 20th Street Station, N.W., Washington, D. C. (20036)

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FOR SALE: Physician's office-home in ideal residential neighborhood in Silver Spring, Md., corner University Blvd. and Franklin Avenue. Fully equipped and furnished for practice of OB-GYN. Telephone MR. JAMES KANE, Whitehall 2-8943.

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FOR LEASE: Medical offices in new TENLEY BUILDING, Rockville Pike, Rockville, Md. February occupancy. Ample free parking. Presently leased 60 per cent to physicians and dentists. Telephone Oliver 4-0642.

TO SUBLET: Office space with internist in PROFESSIONAL MEDICAL BUILDING, Silver Spring area. Prefer OB-GYN, surgical subspecialist or psychiatrist. Telephone 587-1992.

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FOR RENT: Space available for pediatrician in excellent location; air-conditioned medical building, now including 2 OB-GYN, internist, surgeons, EENT and dentists. Address Box 79, 1718 M Street, N.W. (20036).

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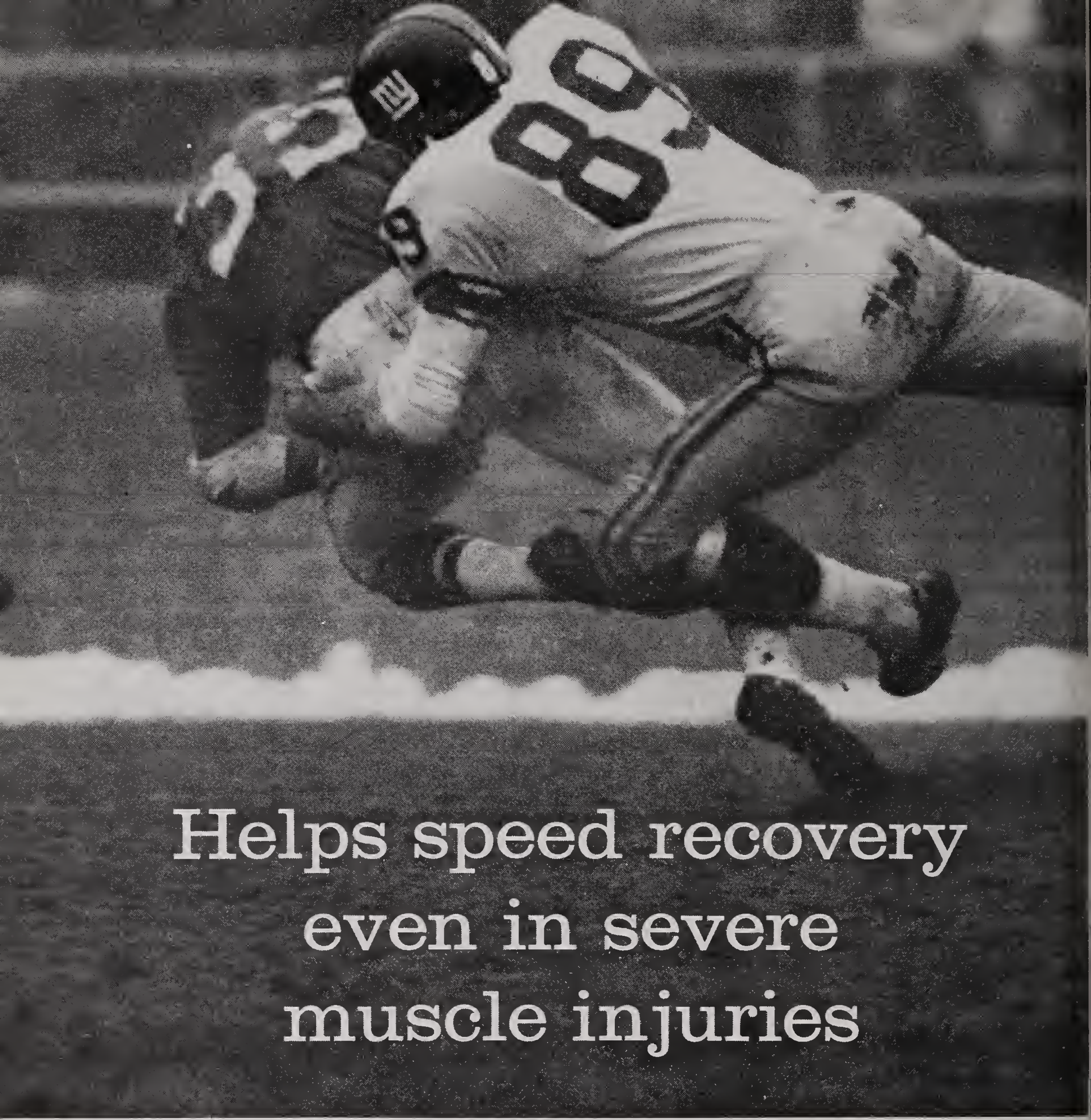

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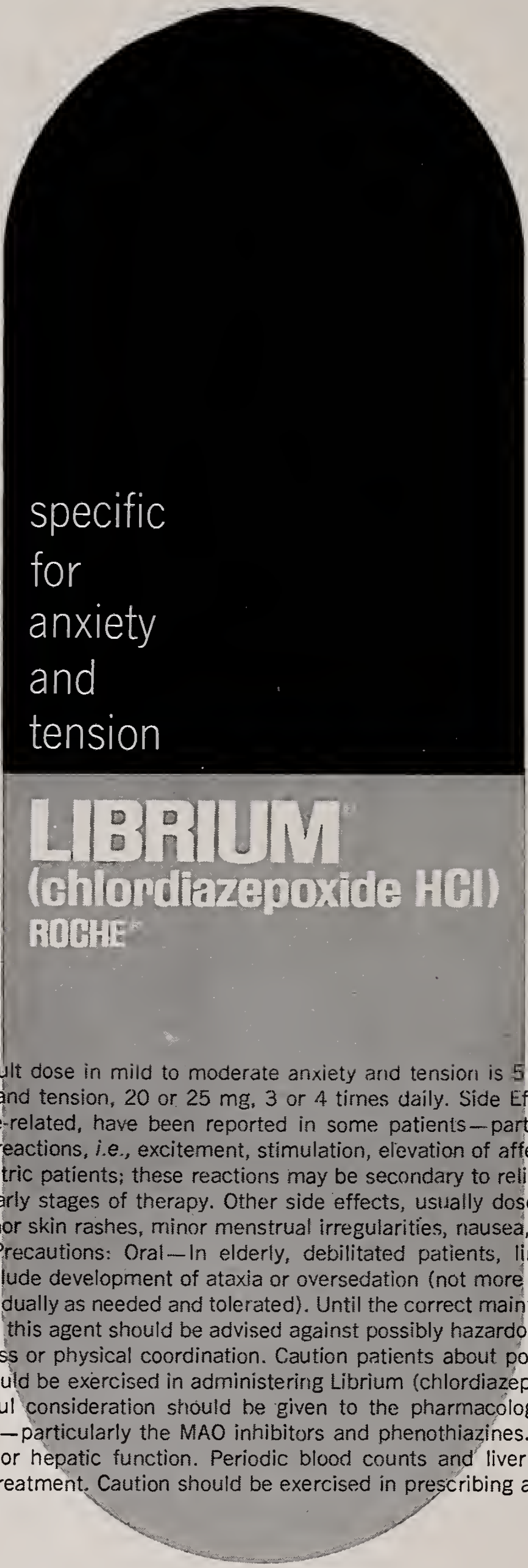

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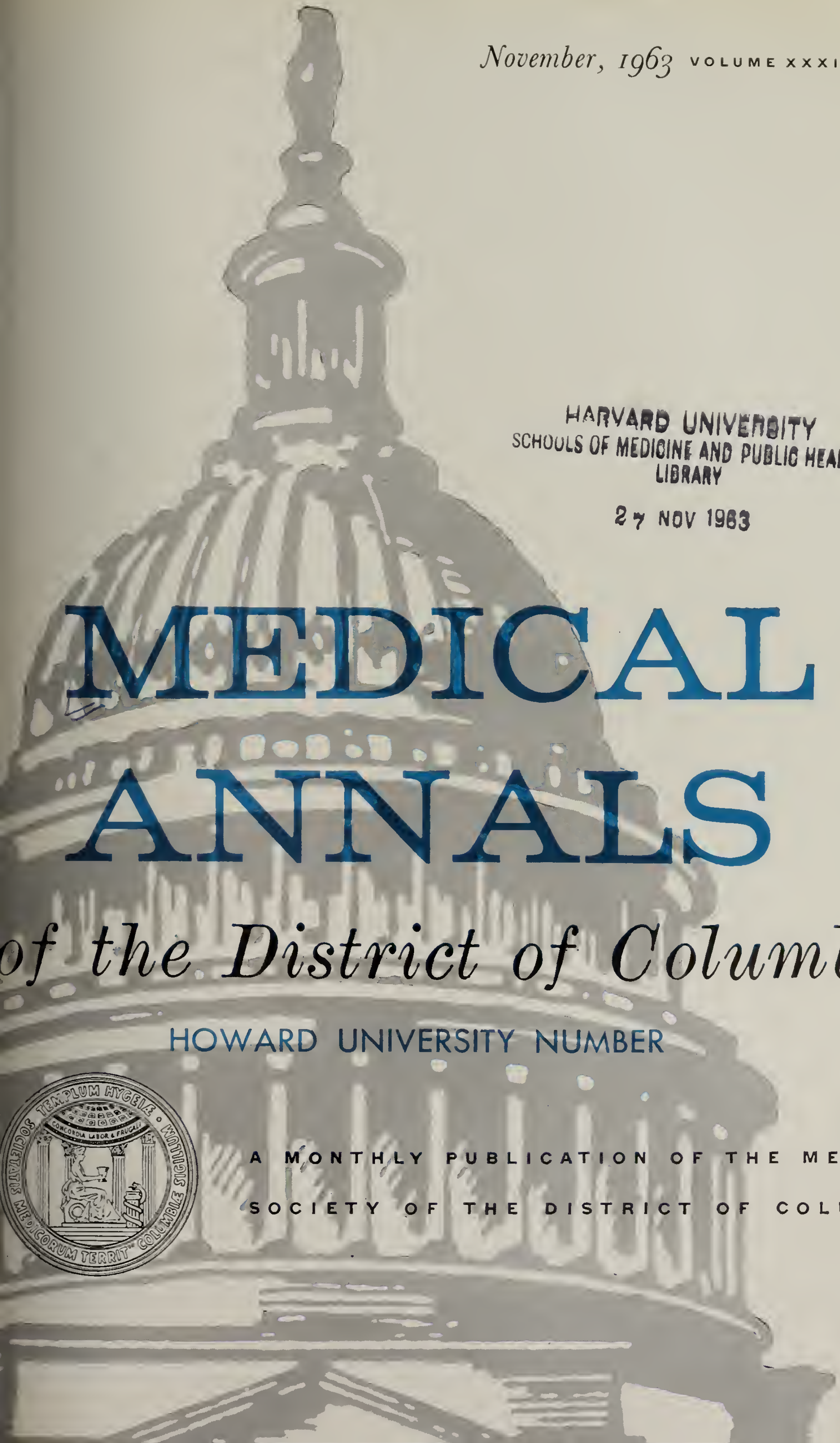
November, 1963 VOLUME XXXII • NUMBER 11



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REFERENCES: (1) Maltby, G. L.: *J. Maine M.A.* 48:257, 1957. (2) Roseman, E.: *Neurology* 11:912, 1961. (3) Bray, P. F.: *Pediatrics* 23:151, 1959. (4) Chao, D. H.; Druckman, R., & Kellaway, P.: Convulsive Disorders of Children, Philadelphia, W. B. Saunders Company, 1958, p. 120. (5) Crawley, J. W.: *M. Clin. North America* 42:317, 1958. (6) Livingston, S.: The Diagnosis and Treatment of Convulsive Disorders in Children, Springfield, Ill., Charles C Thomas, 1954, p. 190. (7) *Ibid.*: *Postgrad. Med.* 20:584, 1956. (8) Merritt, H. H.: *Brit. M. J.* 1:666, 1958. (9) Carter, C. H.: *Arch. Neurol. & Psychiat.* 79:136, 1958. (10) Thomas, M. H., in Green, J. R., & Steelman, H. F.: Epileptic Seizures, Baltimore, The Williams & Wilkins Company, 1956, pp. 37-48. (11) Goodman, L. S., & Gilman, A.: The Pharmacological Basis of Therapeutics, ed. 2, New York, The Macmillan Company, 1955, p. 187.

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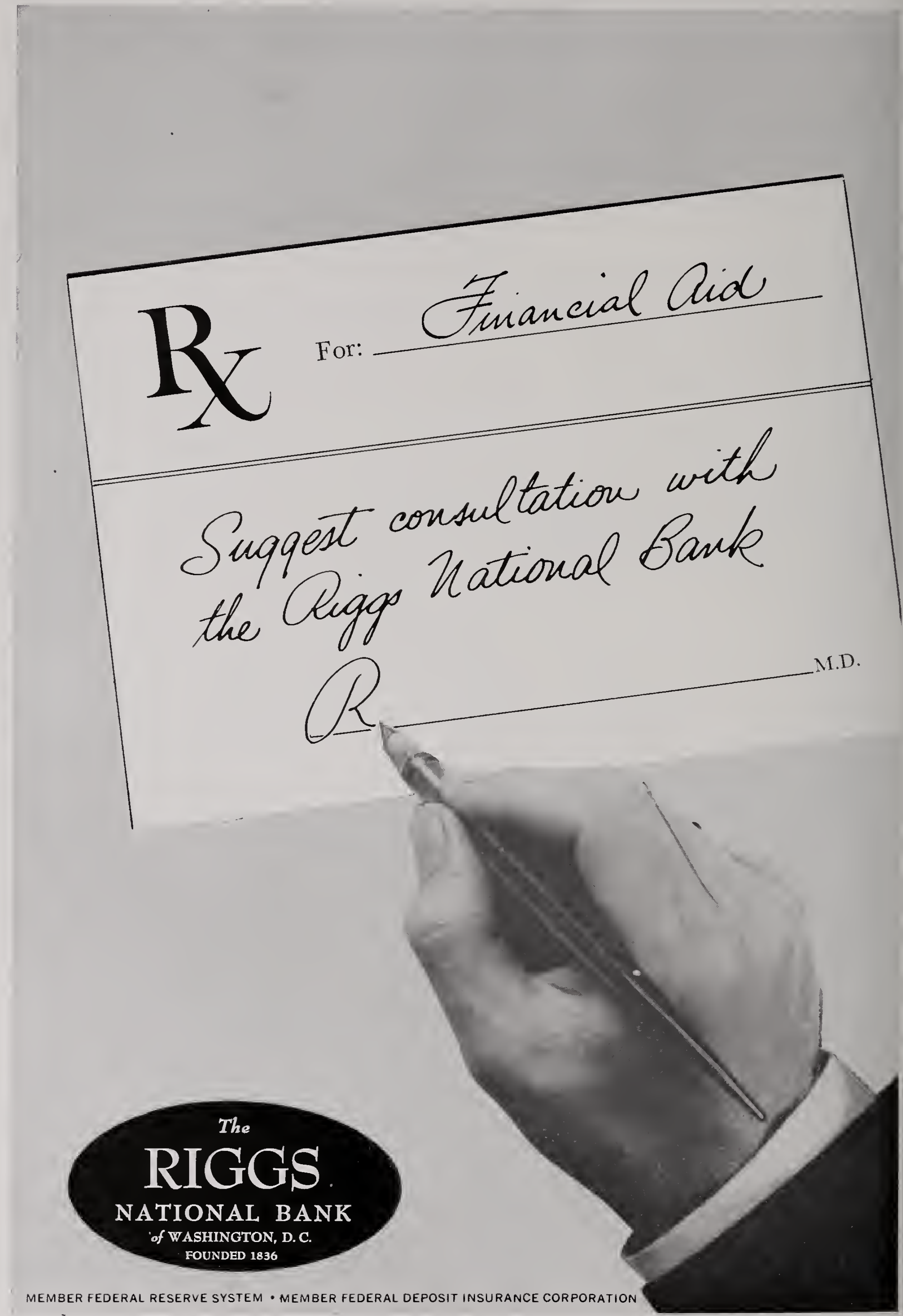

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the District of Columbia

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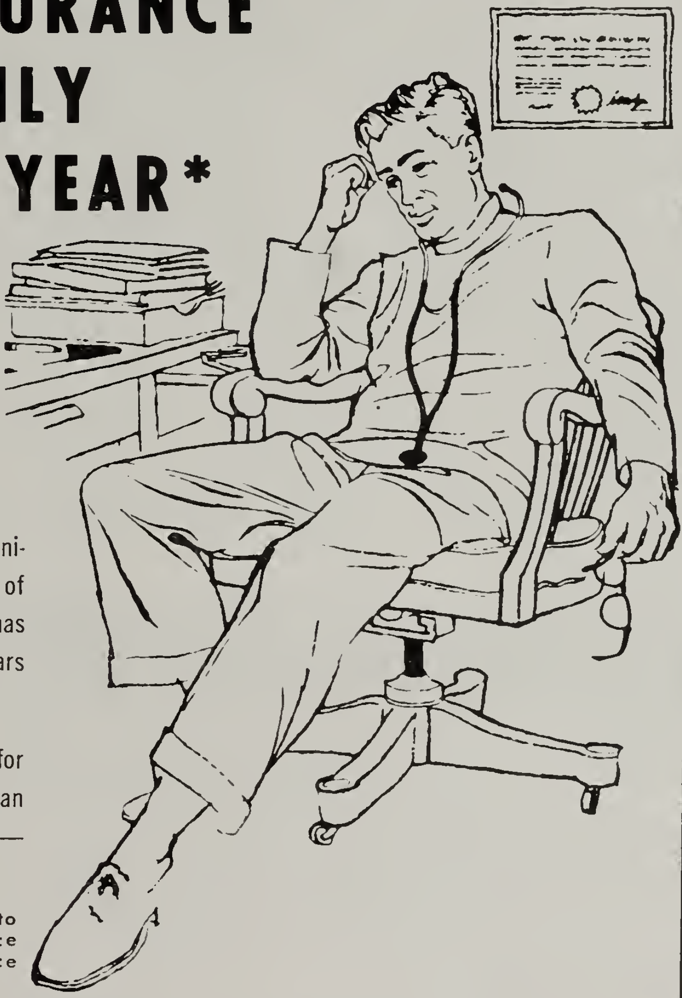

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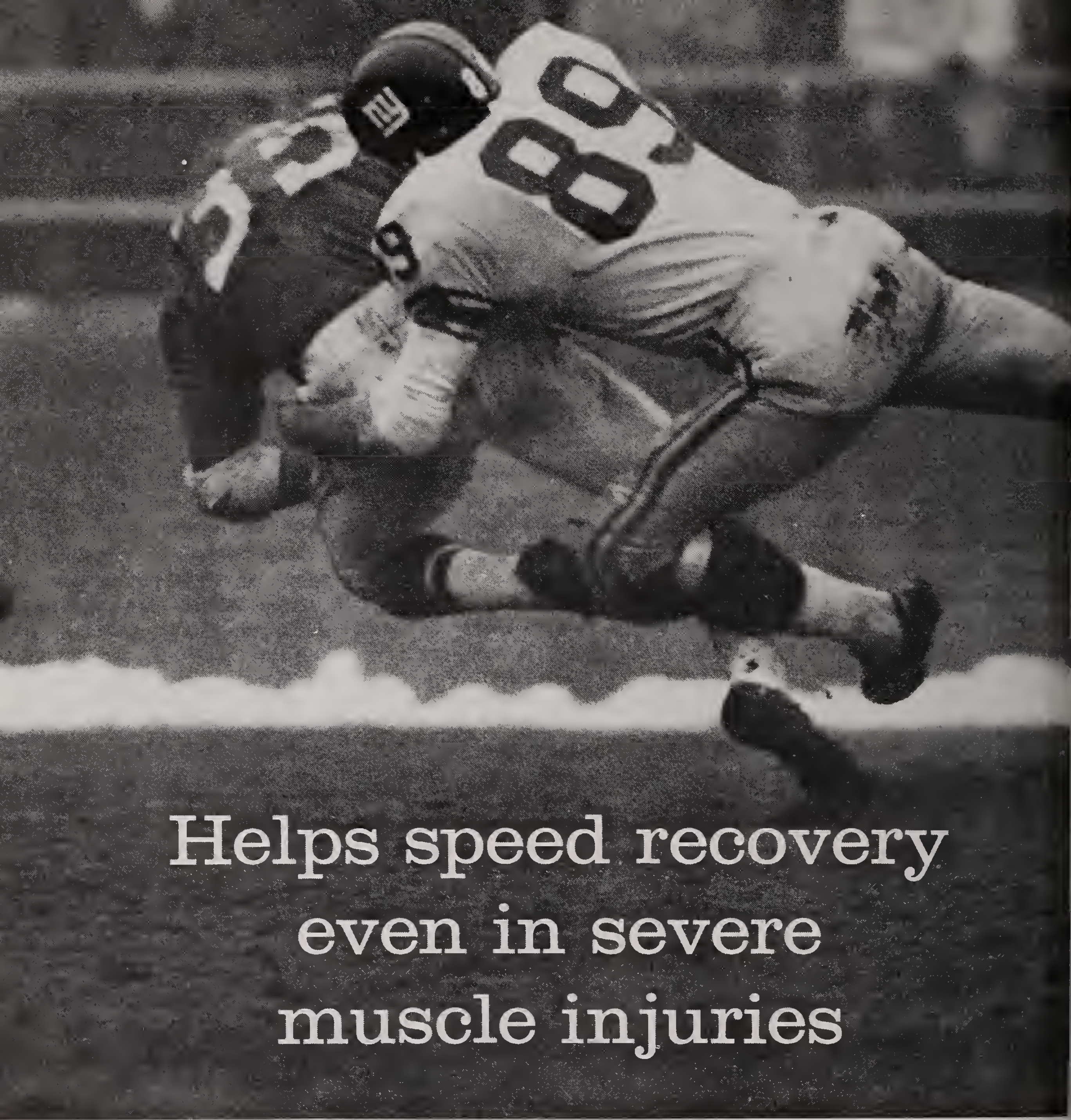

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USUAL DOSAGE: ONE 350 MG. TABLET Q.I.

The muscle relaxant with
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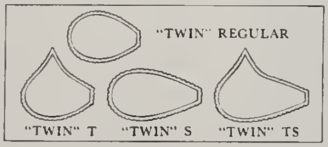

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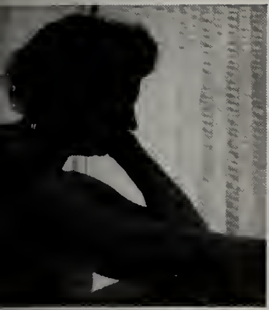
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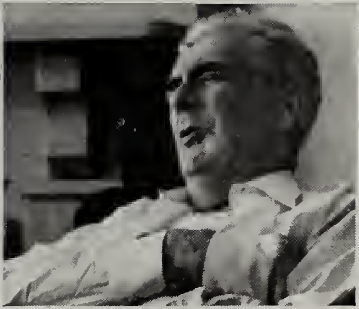
The heart-disease patient

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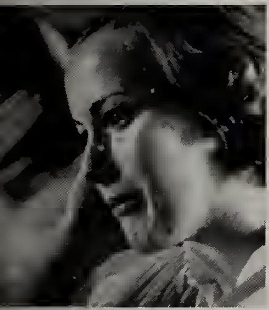
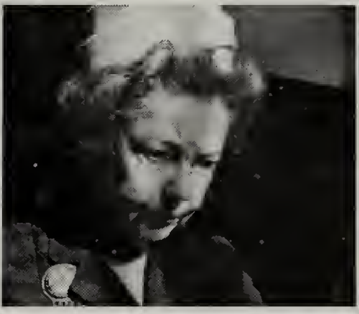
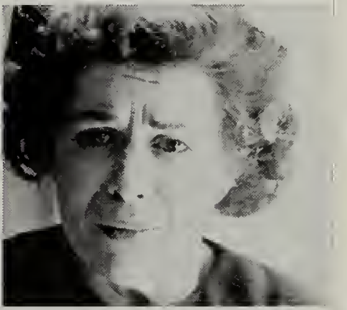

girl with dermatosis

Tension headache


The woman in menopause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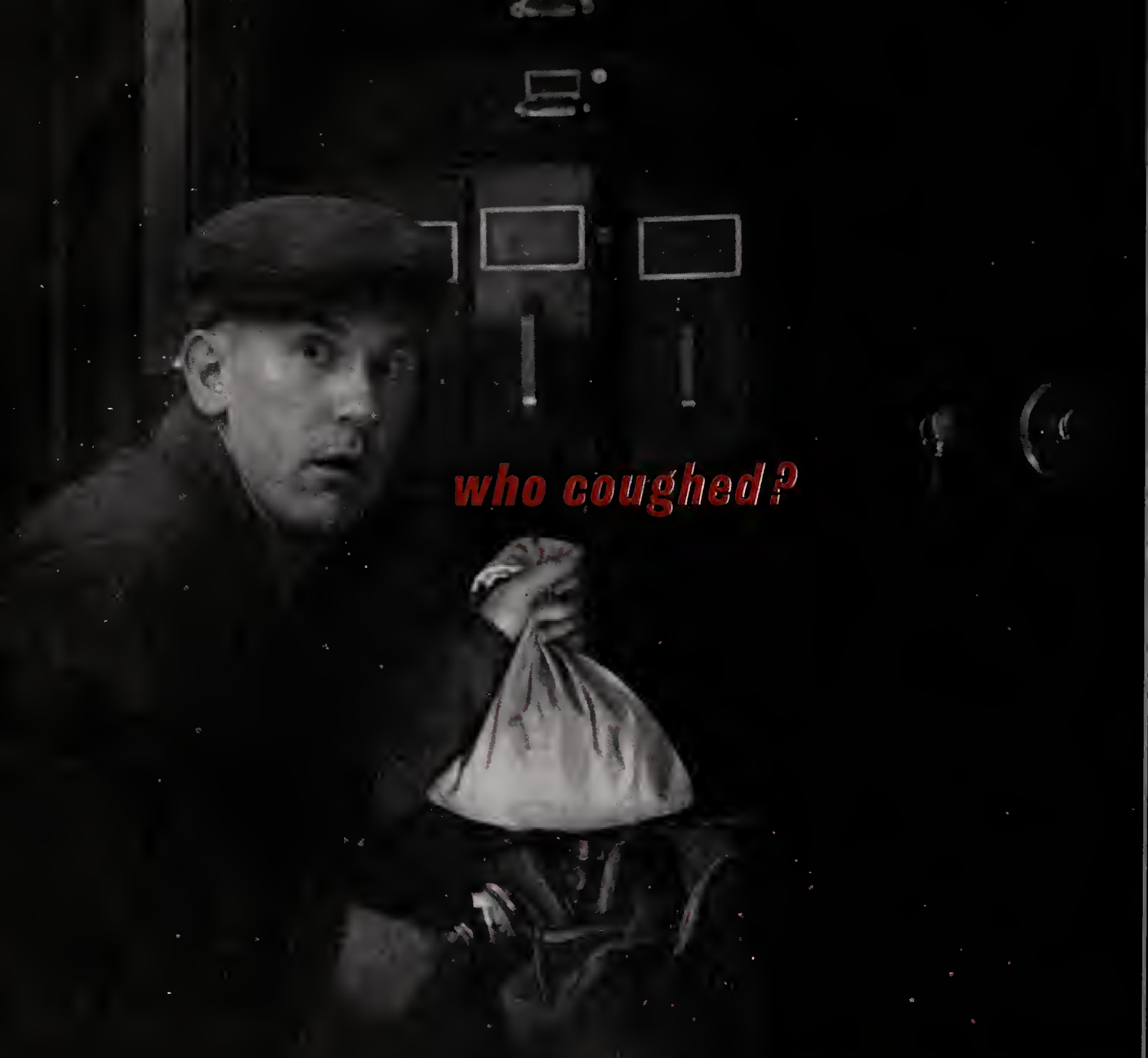
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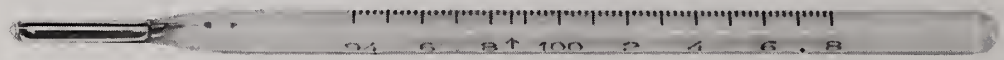

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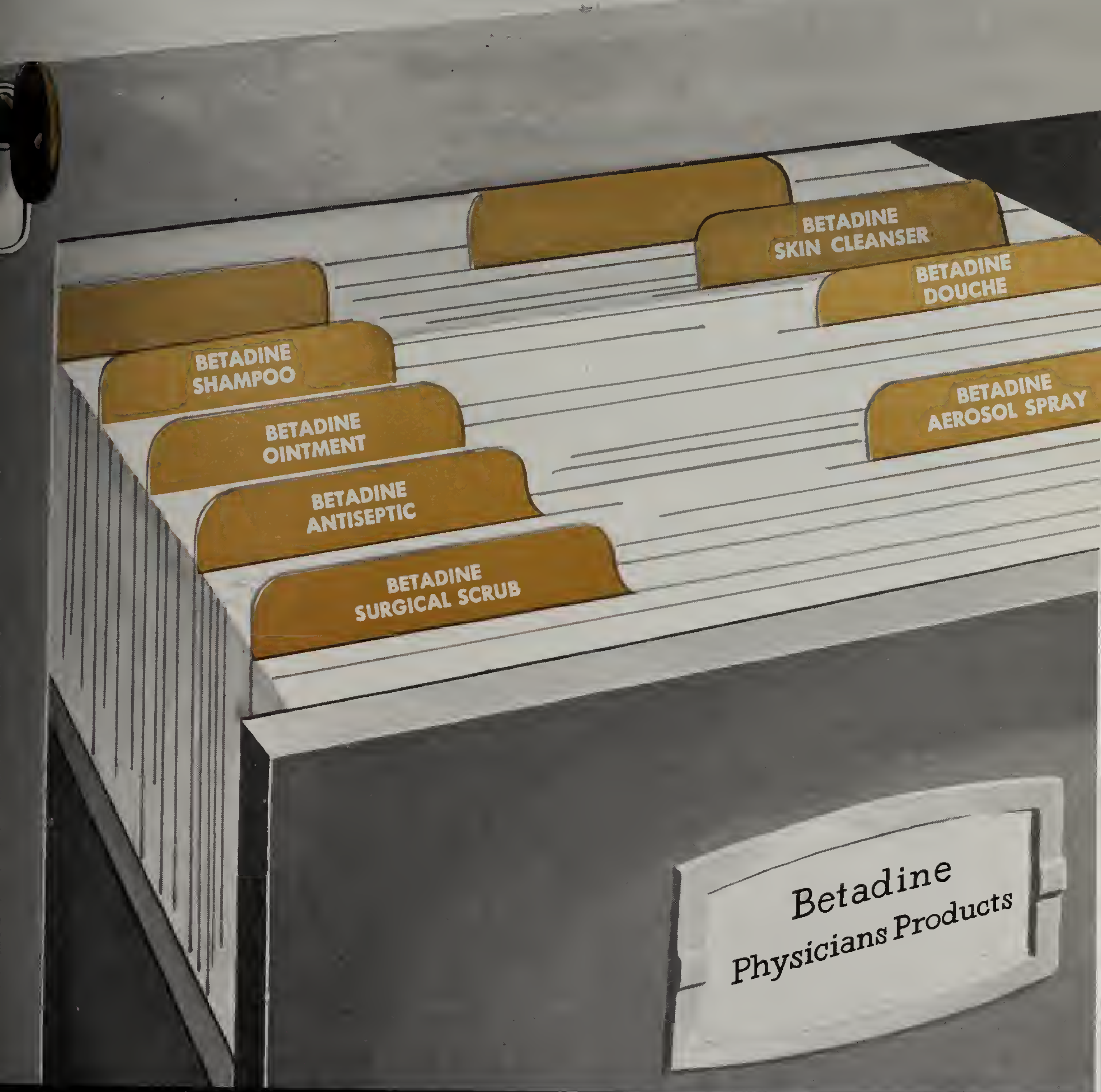
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Important news in cardiac therapy

Two new clinical reports document successful long-term treatment of ischemic heart disease with Persantin®, brand of dipyridamole

See next
3 pages

Study 1.
Griep, A.H.: Long-term Therapy of Ischemic Heart Disease With Oral Dipyridamole: A Report of Fifty Cases. Angiology 14:484, 1963.

Persantin,® brand of dipyridamole, 25 mg. t.i.d. or q.i.d., was administered continuously for 6 months to 50 patients with well authenticated ischemic heart disease with angina pectoris and ECG abnormalities. Results were evaluated on a monthly basis.

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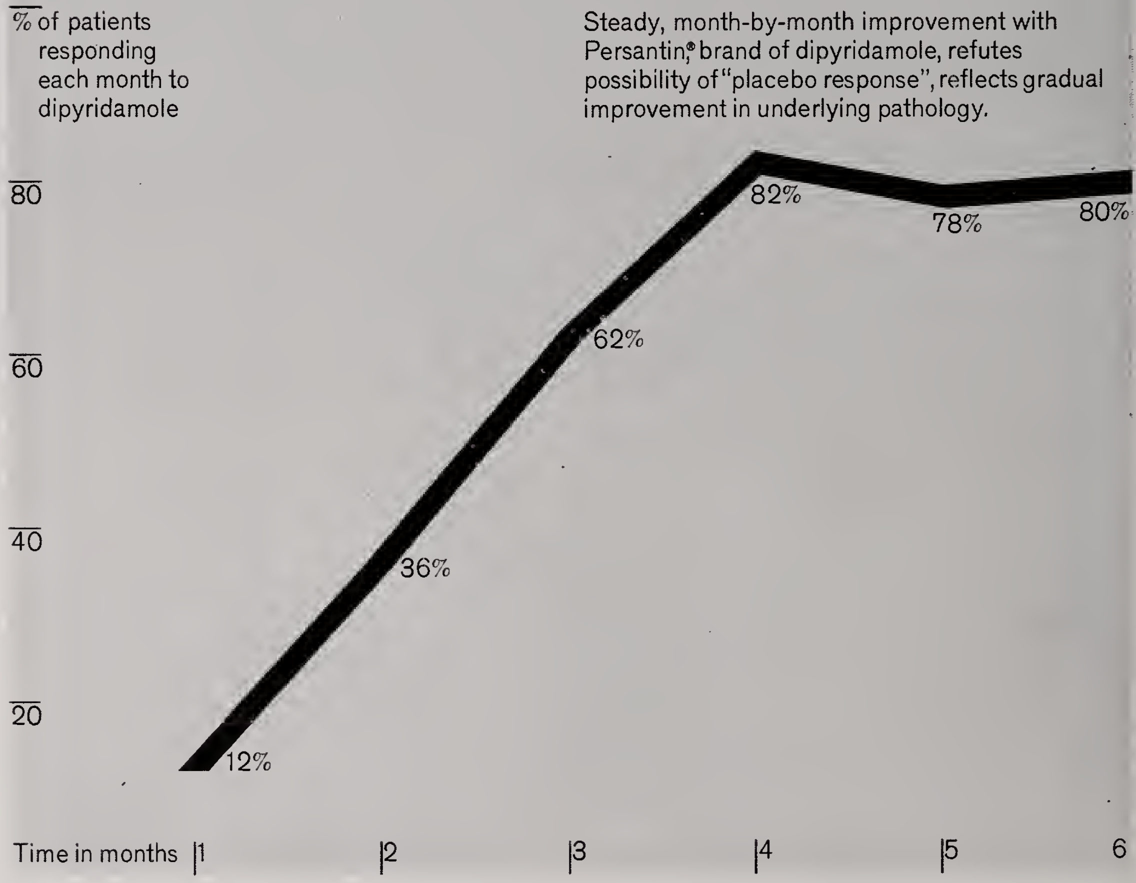

Study 2.
Wirecki, M.: Dipyridamole (Persantin®): Evaluation of Long-Term Therapy in Angina Pectoris. Current Therapeutic Research 5:472, 1963.

In 40 ambulatory patients with myocardial ischemia, angina pectoris, and abnormal ECG findings, Persantin® brand of dipyridamole, 25 mg. t.i.d., was administered continuously for 3 months.

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After 3 months, 32 of 40 patients showed:

“...reduction or abolition of acute anginal attacks...

“complete or almost complete disappearance of ECG abnormalities...

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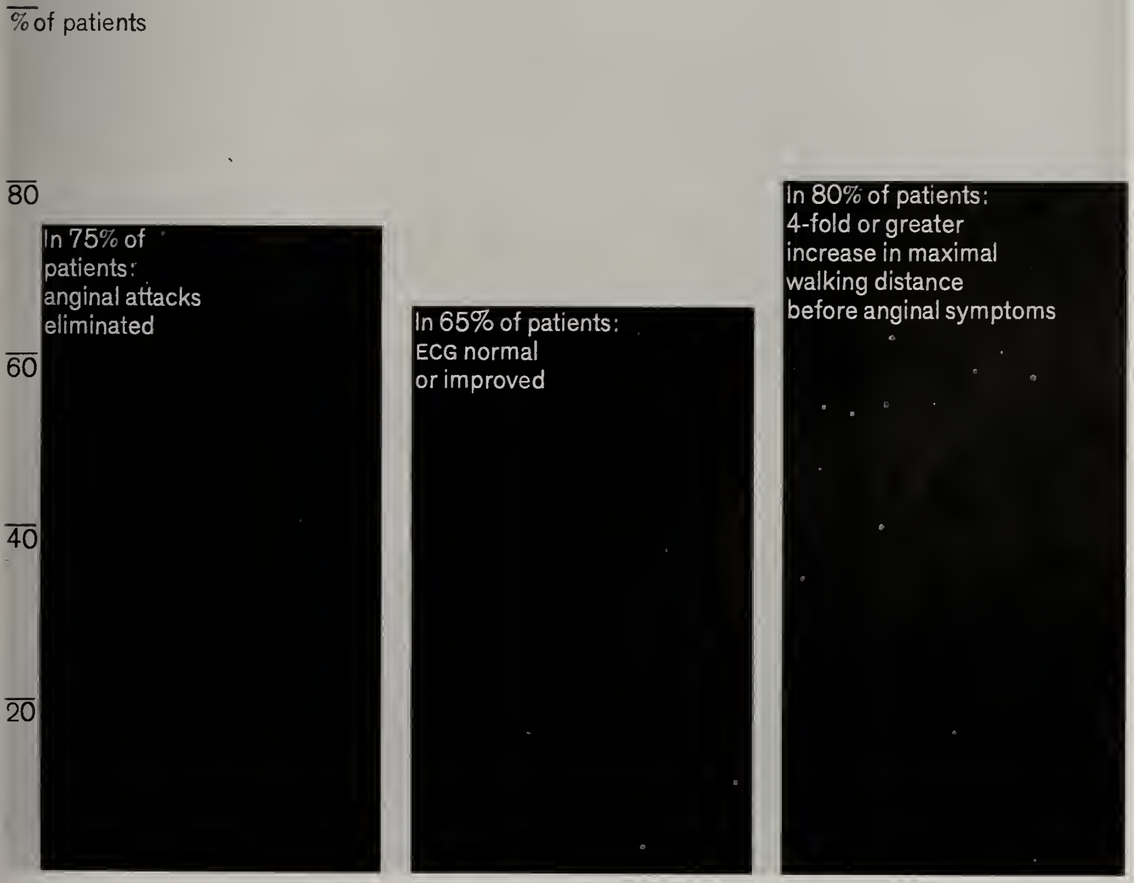

Persantin® brand of dipyridamole

How long-term therapy provides clinical benefits reported on previous pages

1. By increasing energy yield
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References: 1.Kunz,W.;Schmid,W.,and Siess,M.: Arzneimittel-Forsch.12:1098,1962. 2.Siess,M.: Arzneimittel-Forsch.12:683,1962. 3.Laudahn,G.: Experientia 17:415,1961. 4.Lamprecht,W.: 27th Congress of the German Society for Circulation Research,Bad Nauheim,1961. 5.Hockerts,T.,and Bögelmann,G.: Arzneimittel-Forsch.9:47,1959. 6.Vineberg,A.M.,et al.: Canad.M.A.J.87:336,1962. 7.Chari,S.R.,et al.: Presented at the International Congress of Chest Physicians,New Delhi,1963. 8.Neuhaus,G.,et al.: Presented at the Fourth World Congress of Cardiology,Mexico City,1962. 9.Asada, S.,et al.: Japanese Circ.J.26:849,1962.

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BOOK REVIEWS

Medical Mycology. Chester W. Emmons, Ph.D., Chapman H. Binford, A.B., M.D., and John P. Utz, M.D. Price, $14.00. Pp. 380, with 388 illustrations on 112 figures and 2 colored plates. Philadelphia: Lea & Febiger, 1963.

The readers of the Annals can take pride in the fact that the authors of this book are residents of our area who are not only well known and admired locally, but also nationally and internationally, for their contributions to the field of medical mycology. The subject matter of the book is of increasing interest and importance. The authors have assembled in a single volume a wealth of information they have painstakingly accumulated over a period of many years. It is for this reason that the bibliography is restricted to only a few important references, a number of which are review articles.

The size of the book is convenient and the type comparatively large and clear. There are several relatively brief introductory chapters which help orient those readers who may use the book occasionally and which also serve to avoid the necessity of repetitiously including certain types of information in subsequent chapters. The photographs are numerous (388) and excellent. They are selected primarily from the collections of the authors and are well chosen for the purpose. A useful appendix is included. It gives methods for the handling of specimens and methods of culturing and staining.

While the book is quite up-to-date no reference was made to the use of fluorescent dyes in staining procedures for the identification of fungi, and only 1 reference was included in the text on the application of the fluorescent antibody technique.

As is usually the case with first editions, there are a number of misspelled words. Those who struggle to spell coccidioidomycosis may be interested in knowing an "i" was omitted from this word on page 165. Another omission, the final "g" from "pigeon droppings," on page 162, may have been made to soften the reference to this substance studied by the authors in buildings within the District of Columbia.

The book will be a useful addition to the library of all physicians, and especially to those interested in infectious diseases, and to dermatologists and pathologists.

George P. Blundell, M.D.

The Care of Minor Hand Injuries, 2nd ed. Adrian E. Flatt, M.A., M.D., F.R.C.S., F.A.C.S. Price, $10.50. Pp. 274, with 120 figures. St. Louis: Mosby, 1963.

The functional result in the injured hand is often related to the quality of the initial care; therefore, it is a matter of great concern that this treatment be proper. Industrialization has greatly increased the number of hand injuries, and it is unfortunate that there are not enough surgeons and physicians with adequate training to give proper care in many instances. While this book is intended to discuss the so-called minor injuries treatable on an outpatient basis, it is doubtful that the average surgeon could handle all of these injuries without admitting the patient to a hospital.

This second edition is well organized. It is divided into 2 sections; the first deals with general principles of care and the second part covers the care of specific injuries. Chapter I correlates essential anatomy to the clinical situation. The author has wisely avoided minutiae and properly placed emphasis on practical and useful data. The section on surgical techniques is well illustrated and contains material that even the seasoned surgeon would find helpful. The second part of the book deals with specific injuries to the skin, nail, pulp, tendons and joints. Included are chapters on amputation, crush injuries, fractures, burns and infections. Thoughtfully, references are listed at the end for the reader who wishes to read further.

The text is extremely well written but is not intended to be read from cover to cover. Its greatest value will be realized when used as a reference. For this reason it will be useful to medical students, house officers and practicing surgeons.

Charles H. Epps, Jr., M.D.

Handbook of the Practice of Anesthesia. John R. S. Shields, M.B., Ch.B., F.F.A.R.C.S. Price, $6.85. Pp. 203, illustrated. St. Louis: Mosby, 1963.

To this reviewer a handbook indicates a volume containing a wealth of material presented in a neat and accessible fashion. This book definitely does not meet these standards. For the little information it contains, there are gross inaccuracies and errors. Some statements are poor and misleading. To cite a few: On page 76, "A hemoglobin of 10 mg./100 ml. is accepted. . ."; this should probably read 10 Gm.; on page 152, in discussing extracorporeal circulation, "a small flow of oxygen to keep about 2 pounds of pressure in the lungs and prevent total collapse. . . ." I have yet to find a manometer measuring pulmonary pressure in pounds; and 2 pounds of pressure is equivalent to 102.4 mm. Hg or 140 cms. H_2O pressure, which is 10 times the average pressure normally utilized to inflate the lungs. The author probably meant 0.2 pounds pressure/sq. inch. In discussing bronchospasm on page 74, "Two other drugs, isoproteronal HCl (Isuprel) and aminophyllin are of outstanding value. If the bronchospasm is very severe and acute, isoproteronal hydrochloride is preferable in doses of 0.04 to 0.06 mg. given intravenously. If an action of longer duration is required and the spasm is not so severe, 250 mg. may be given intravenously." Obviously, the author failed to specify that the 250 mg. refers to aminophyllin.

No mention is made of keeping endotracheal equipment clean and sterile, especially for infants. Complications in general are dealt with very superficially. Some very pertinent subject matter is hardly covered.

(*Continued on page 28*)

NEW AND FORTHCOMING BOOKS

NORMAL PSYCHOLOGY OF THE AGING PROCESS by **Norman E. Zinberg, M.D.**, Associate Director of Psychiatric Service, Beth Israel Hospital; Lecturer in Social Relations at Harvard University and Associate in Psychiatry at Harvard Medical School; **and Irving Kaufman, M.D.**, President of the New England Council for Child Psychiatry and Psychiatrist at the Massachusetts Institute of Technology.

The authors and contributors discuss the fundamental theory and clinical aspects of normal aging. They consider the relationship of the physiology to the psychology of aging. They regard aging from their common psychoanalytic frame of reference and in terms of social and cultural implication.

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DISEASES OF THE KIDNEY edited by **Maurice B. Strauss, M.D.**, Boston University School of Medicine; **and Louis G. Welt, M.D.**, University of North Carolina School of Medicine; with 43 contributing authors.

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EARLY CANCER—PREVENTION, DETECTION, COURSE, TREATMENT by **Leonard B. Goldman, M.D.**, Chairman, Tumor Conference, and Director, Radiation Medicine Department, Queens Hospital Center; formerly Clinical Professor of Radiotherapy, New York Medical College.

This new book is intended to increase the physician's skill in detecting early cancer and to further his knowledge of its treatment. In a well organized and straightforward manner, Dr. Goldman isolates and opens up for the reader's inspection most known types of cancer, presenting the fundamentals of early diagnosis and definitive methods of treatment. The book is streamlined for quick reference, simply written, well illustrated with roentgenograms, photographs and drawings.

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Book Reviews

(*Continued from page 26*)

I cannot recommend this book as good reading material to undergraduate students or anyone interested in the art, science or practice of anesthesia.

S. N. Albert, M.D.

Protein Metabolism: Influence of Growth Hormone, Anabolic Steroids, and Nutrition in Health and Disease. An International Symposium, Leyden, 25th–29th June, 1962, sponsored by CIBA. Edited by F. Gross, Basle. Chairman: A. Querido, Leyden. Pp. 521, with 159 figures. Berlin: Springer-Verlag, 1962.

The volume is a very interesting one dealing with the action of hormones at the cellular level, dietary and environmental factors affecting growth and metabolism in the organism. The book comprises 2 sections, first, dealing with a very basic evaluation of modes of action of anabolic steroids and, second, detailing protein metabolism in pathologic states in man and the effect of anabolic agents thereon. It reviews the current basic work in protein metabolism by some of the people who are most active in the field. The contents would be of interest to individuals working in biochemistry, physiology and the pathophysiology of disorders in animals and man. Although these works would not have much immediate value to clinicians dealing with patients, there are some very interesting papers concerning the evaluation of long-acting anabolic steroids which revealed that as yet no such agent has been developed without concomitant side-effects.

The most interesting clinical paper, which would be worthwhile reading for any clinician, is that of Tanner which contains an evaluation of growth and maturity in children. Therein he critically reviews the value of span, height-age, weight-age concepts and makes a plea for revising our criterion in terms of bone-age. Particularly interesting is the discussion which follows wherein Dr. Frazer, another authority from the United Kingdom, takes up the problem of evaluating growth by various measurements. Noteworthy are a small section devoted to osteopenia (osteoporosis), some interesting information by I. Arias on the effects of anabolic steroids on liver function, Hess Thaysen's studies concerning the use of anabolic steroids in renal failure, and Wayne Rundels' very comprehensive review of the action of anabolic steroids on the cells.

The book is organized in typical Ciba Symposium outline where a great deal of worthwhile information may be found throughout its pages of papers and discussions. The book may be recommended as a reference source for current workers in the field. Pediatricians and physicians interested in adolescent medicine and people interested in growth and the management of protein-depleted patients will find certain segments of the book very worthwhile.

John J. Canary, M.D.

Modern Clinical Psychiatry, 6th ed. Arthur P. Noyes, M.D., and Lawrence C. Kolb, M.D. Price, $8.00. Pp. 586. Philadelphia: Saunders, 1963.

Having been schooled with an earlier edition of this text, I am impressed with the more comprehensive and the more dynamic presentation of this sixth edition. The book throughout reflects the increased hopefulness of modern psychiatric conceptions and clinical practice in the understanding, treatment and prevention of emotional illness. This is particularly reflected in the chapter on psychotic disorders where the schizophrenic reactions are described in terms of "immature processes of communication and adaptation" that eventually may lead to impaired capacity to adapt to the social demands of life. Psychotherapy of the schizophrenic patient is thoroughly covered with far less pessimism than former editions. The therapeutic emphasis is on a "constant effort . . . to keep alive or reëstablish an affective contact with reality," that the patient not be lost in the obscurity of chronically ill persons in the overcrowded ward. Although drugs and other physical therapies are discussed, the theme is of ego strengthening through interpersonal contacts and learning that lead to increased personal autonomy.

The Psychoneuroses are classified after the Diagnostic and Statistical Manual of Mental Disorders issued by the American Psychiatric Association. In numerous other ways I find this sixth edition assertively presenting Modern Clinical Psychiatry. Psychiatry and the Law and the Hospitalization of the Mentally Ill, voluntarily and involuntarily, are brought up to date. Child Psychiatry as an evolving subspecialty is given a separate chapter. Alcoholism is presented with an awareness of the current Alcoholism Rehabilitation movement, including a discussion of Alcoholics Anonymous; Mental Deficiency is given lucid and comprehensive treatment in keeping with the expanding national interest on the subject; Organic Brain Syndromes and the Senile Psychoses are discussed with rehabilitation and adaptation in the foreground.

This standard psychiatric text remains an excellent, expanding guide for medical students, general practitioners, and psychiatrists. As a reference source for those workers in the legal professions and the social sciences, who frequently require a standard textbook on psychiatric subjects, the book is very graphically, concisely, and authoritatively written.

Anthony Zappala, M.D.

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BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received.

Diseases of the Skin: For Practitioners and Students, 5th ed. George Clinton Andrews, M.D., F.A.C.P., and Anthony N. Domonkos, M.D., F.A.C.P. Price, $16.50. Pp. 749, with 605 illustrations. Philadelphia: Saunders, 1963.

Crossen's Synopsis of Gynecology, 6th ed. Daniel Winston Beacham, M.D., and Woodard Davis Beacham, M.D. Price, $7.50. Pp. 371, with 106 figures, including 3 in color. St. Louis: Mosby, 1963.

Human Aging, a Biological and Behavioral Study. Edited by James E. Birren, Ph.D., Robert N. Butler, M.D., Samuel W. Greenhouse, Ph.D., Louis Sokoloff, M.D., and Marian R. Yarrow, Ph.D. (with the early editorial collaboration of Seymour Perlin, M.D.). PHS Publ. No. 986. Price, $3.00. Pp. 328. Washington 25, D.C.: Superintendent of Documents, U.S. Government Printing Office, 1963.

Medical Department, United States Army: Personnel in World War II. Colonel John Boyd Coates, Jr., M.C., Editor-in-Chief; Charles M. Wiltse, Ph.D., Litt. D., Editor for Personnel. Prepared and published under the direction of Lieutenant General Leonard D. Heaton, The Surgeon General, United States Army. Price, $6.00. Pp. 548, with 40 illustrations, 68 tables, 7 charts. Washington 25, D.C.: Superintendent of Documents, U. S. Government Printing Office, 1963.

The Care of the Rheumatoid Hand. Adrian E. Flatt, M.A., M.D., F.R.C.S., F.A.C.S. Price, $11.50. Pp. 222, with 102 illustrations. St. Louis: Mosby, 1963.

Review of Medical Physiology. William F. Ganong, M.D. Price (paper), $6.50. Pp. 577, illustrated. Los Altos, Calif.: Lange, 1963.

Experimental Pharmacodynamics, 3rd ed. T. Koppanyi and A. G. Karczmar. Price (paper), $6.50. Pp. 246, illustrated. Minneapolis: Burgess, 1963.

Elementary Medical Statistics, 2nd ed. Donald Mainland, M.B., CH.B., D.Sc., F.R.S.E., F.R.S.C., F.A.S.A. Price, $9.00. Pp. 381. Philadelphia: Saunders, 1963.

Physical Diagnosis: The History and Examination of the Patient, 2nd ed. John A. Prior, M.D., and Jack S. Silberstein, M.D. Price, $8.50. Pp. 455, with 277 illustrations. St. Louis: Mosby, 1963.

Handbook of Orthopaedic Surgery, 6th ed. Alfred Rives Shands, Jr., M.D., F.A.C.S., and Richard Beverly Raney, B.A., M.D., F.A.C.S., with the collaboration of H. Robert Brashear, B.A., M.D., F.A.C.S. Price, $11.50. Pp. 591, with 277 illustrations and a bibliography. St. Louis: Mosby, 1963.

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Soft-tissue Mammography with Comments on a Survey*†

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IN THE PAST DECADE mammography by means of a special soft-tissue technique has increased in demand by clinicians and patients. It is appealing to the medical profession because of its ease of accomplishment and better than 90 per cent accuracy in differentiating benign from malignant lesions of the breast. The facts that a permanent record is established for review and comparison and that definite criteria of malignancy are evident in most cancerous growths have contributed to the acceptability of the procedure. The public awareness and popularity stem from various articles appearing in the lay press and the nonoperative approach to the diagnosis of lesions of the breast.

However, some clinicians are still concerned about the value of this procedure. Doubt exists in the minds of many radiologists who have tried the technique and encountered difficulty in producing radiograms of diagnostic quality and reliability.

At Freedmen's Hospital a survey was conducted only on patients with clinical suspicion of breast disease. The majority of these patients were submitted to surgery, and the radiographic impression was compared with the microscopic diagnosis. Our results at Freedmen's Hospital depict reproducibility of technique, and the radiographic impressions show a degree of accuracy comparable to that of other investigators. Reviewing the results of a survey done only on patients with clinically suspicious disease of the breast appears to be a prerequisite for determining its value as a screening aid.

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* Supported in part by a USPHS General Research Fund Grant No. 397-17.

† Presented before the meeting of the Association of Former Interns and Residents of Freedmen's Hospital in Washington, D. C., June 6, 1963.

History

Salomon, a German surgeon, in 1913 was the first to report the value of X-ray films of the breast.[1] He studied 3,000 amputated breast specimens and found that roentgenograms gave a true picture of the margins and extent of a tumor. He also reported the first clinically occult carcinoma of the breast. Later, contributions regarding the normal and pathologic appearance of the breast on X-ray films appeared in the South American and European literature with the works of Goyanas et al, Dominguez and Vogel.[1] Leborgne[2] of Uruguay in 1951 was the first to reveal the significance of certain calcifications seen in malignant lesions of the breast. The greatest impact on American radiologists began with the stereoscopic films reported by Warren, Frey and Warren in 1932.[1] They pointed out the value of interval follow-up of breast changes and gave excellent descriptions of the normal gland at rest and during pregnancy. Gershon-Cohen, presently at the Albert Einstein Medical Center, beginning his work in 1938, has probably done more than any other American radiologist in trying to establish mammography as a routine diagnostic procedure. His publication on Cyclic Disturbances in the Breast with Reference to Surgical Diagnosis (1952)[3] and many others,[4] etc. are recommended to the student of mammography.

Gershon-Cohen's works were complemented and probably shadowed by the astounding results obtained by Robert L. Egan[5] of the M. D. Anderson Hospital and reported in 1960. Egan's improved technique, covering a statistical analysis of 1,000 studies, covered some 240 malignant lesions with a reported diagnostic error of only 0.83 per cent. His more critical delineation of the details of pathologic processes of the breast by elimination of many technical hazards and variables attending prior studies formed the basis of our interest in mammography. The diagnostic signs were still those so vividly elucidated by Leborgne.[6]

Technique

The technique for soft-tissue mammography is based on the varying absorptive properties of glandular and connective tissue. In the normal breast the denser glandular tissue made up by the acini, collecting ductal system, and periacinal and periductal connective tissue with its supporting Cooper's ligaments is in contrast with the more radiolucent fatty tissue. Physiologic changes produce a general change in this relationship, wherein pathologic processes cause localized changes more often manifest as increased radio-opacity. The virginal breast with its abundance of glandular and periductal tissue and paucity of fat produces the least change in contrast. The menopausal breast with its generous fat content produces the greatest contrast. Reproduction of this soft-tissue detail is best accomplished by the use of a fine-grain film with low kilovoltage, longer milliampere seconds, and the absence of filtration and intensifying screens.[5] The use of a cone to decrease scatter radiation is also recommended.

The technique will vary among investigators with the capacity of the X-ray unit (table 1). Egan[5] recommends a target-skin-distance of 36 inches with Industrial Type M Film, 300 ma at 6 seconds. The kv is varied until 15 mm. of aluminum is faintly penetrated. Only 1 of the 7 units employed in our 487-bed hospital produced satisfactory mammograms with Egan's technique. Our dominant variable has been kilovoltage for penetration, with the target-skin-distance varied occasionally according to the size of the breast.

TABLE 1. Technique for Soft-Tissue Mammography

	kv	ma	Time (seconds)	TSD* (inches)	Film	Cone
Egan[11]	22–34	300	6	36 (20–40)	Industrial M	Yes
Gershon-Cohen[10]	25–30	100	1–3.5	16	Non-screen	Yes
Freedmen's Hospital	29–34	300	6	36 (30–36)	Industrial M	Yes

* Target-skin-distance.

Craniocaudal and lateral projections were utilized routinely. The oblique view as recommended by Egan has been used infrequently.

After exposing the films an attempt is made to develop them as soon as possible or store them in a cool environment for preservation of quality. Developing time has been 10 minutes at 68°F instead of the recommended 5 to 8 minutes. Fixation usually requires 10 to 20 minutes.

Evaluation

Our pilot study at Freedmen's Hospital has encompassed 123 studies performed on 94 breasts of 73 patients (table 2). The diagnoses are recorded as benign, malignant, or uncertain, whenever obtained with clarity from the referring physician. If there was question, the diagnostic impresson by one of us (W.W.F.) was placed as the clinical impression. This method though not infallible does produce uniformity. The value of X-ray diagnosis was clear in the clinically uncertain or negative group with 4 lesions being definitely called malignant and 23 showing benignancy.

TABLE 2. Freedmen's Hospital Pilot Study (October 1962–May 1963)

Patients studied	73
Breasts examined	94
Total studies	123
Nondiagnostic	15
Poor technique (readable)	4
X-ray uncertain	12
Benign	11
Malignant*	1
Clinically uncertain or negative	54
X-ray definite	27
Benign or not malignant	23
Malignant	4

* Characteristics definite in retrospect

The criteria for differential diagnosis are depicted in table 3 and represent accumulated data from various authors.[2, 4-11] Benignancy is usual when more than 1 lesion is found in a single breast. One notable exception occurred in a 54-year-old woman with both a clinically benign lesion and a suspicious malignant lesion in the same breast. The diagnoses of both lesions were made from the X-ray films, predominantly by the typical calcification found in each, and were made also of 2 other benign lesions which were pointed out to the prosector at the time of mastectomy. Three months later the patient was suspected to have a cystic lesion in the opposite breast which did not disappear after aspiration of 1 c.c. of fluid. Roentgenograms showed this to be a benign lesion. The pathologist reported a degenerating fibroadenoma.

TABLE 3. Differential Diagnostic Features in Soft-tissue Mammography*

Mass	Benign	Malignant
Number	Often numerous	More often single
Border	Well-defined	Ill-defined, spiculated and ameboid
Density	Glandular	Increased
Size	Same size or larger	Radiographically smaller
Calcification	Eccentric and coarse	Central or peripheral punctate or spiculated
Peripheral tissue	Normal or compressed	Disrupted
Areola and skin	Thin and unaffected	Edematous or thickened

* Modified from Ross and Bolton[8]

The border of a malignant mass on X-ray films is ill-defined since the mass often defies circumscription clinically. The spiculated and ameboid character is quite striking. Cancerous areas are more locally dense when compared to the normal and physiologic changes occurring in the breast. Some of the reasons for this could be increased mineral deposition and fat necrosis. One of the advantages of clinical correlation lies in the comparison of palpable and radiographic size of the tumor. The malignant mass is almost uniformly smaller on roentgenogram. We have often observed the radiographic size to be one-half the clinical dimensions. Small cancerous growths may also produce an edematous induration 10 times the X-ray size.

Punctate, sand-grain or spiculated calcifications have become pathognomonic of malignancy.[2, 4, 5, 11, 12] These calcifications are small and located near the center or dispersed at the periphery of the lesion in cancer, being coarse and eccentrically located in benign processes. Leborgne[6] stated that this calcification may also be the only roentgenographic sign when no nodule is present. This characteristic sign has been observed in 30 per cent of malignant tumors reported by Leborgne[2, 6] and Gershon-Cohen.[12] Egan[5] reported this observation in 118 of 245 cases (48 per cent). We have found it to be present in 53 per cent (8 of 15) patients with carcinoma.

Since benign tumors are usually encapsulated with a true or pseudocapsule, it is to be expected that the surrounding tissue will be compressed as the mass becomes larger. In contrast to this, the infiltrating cancer disrupts and penetrates the adjacent tissues. Benign tumors rarely affect the skin by contiguous growth unless the size causes some stretching of the overlying dermis. With malignant tumors the infiltration of Cooper's ligaments and blockage of lymphatics will often produce the characteristic peau d'orange appearance. As already alluded to, this may be caused by a small malignant lesion.

The indications and application of mammography are as follows[11]:

Breast complaints with or without palpable mass. For patients with nipple discharge, soft-tissue and contrast mammography[13] are recommended. The latter procedure has been especially helpful in localizing and defining the lesions associated with this clinical sign. Ductal ectasia, subareolar fibrosis, edema, and large breasts may mask a small carcinoma which may be easily defined by mammography. The cancerophobic patient also may be assured of negative breasts with periodic X-ray examinations.

Screening survey of general population. To screen the entire population with mammograms would encompass too great a task even with all radiologists working full time, but in many selected instances the screening procedure is rewarding. As Egan[11] stated, "Clinical search of the breast for the primary site of an obvious metastatic lesion is often tedious." Presently, at Freedmen's Hospital 4 patients are under surveillance, 1 each with metastatic sites to the axilla, scalp, skin of the back, and left femur.

Survey of patients with family history of breast cancer. It is a well-documented fact that patients with a family history of cancer have a greater tendency to develop a malignant neoplasm than the general population.[14] Our present ability to detect very early cancer of the breast other than through the medium of mammography is almost limited to the gross clinical examination. At best, this method has poor early detection yields, and too frequently when the tumor is detected by this modality the patient already has local or distant metastases. In patients with strong family histories, mammography combined with routine self-examination and clinical check-up every 3 to 6 months will greatly enhance the discovery of early cancer and concomitantly boost the percentage of cures.

*Indefinite palpable findings.*A definite clinical diagnosis not preceded by frozen section is usually relegated to those malignant tumors which have obvious extramammary involvement and are usually noncurable; however, the actual incidence of an indefinite clinical finding is difficult to determine. Mammography based on the foregoing criteria of diagnostic differentiation should define the process in approximately 90 per cent of the cases.

Evaluation of response to therapy. This may follow surgical excision of multiple tumors of the breast in which mammograms are employed to define a missed mass or confirm the excision of all suspicious ones. Mammography may also play a significant role in charting the progress of patients having received hormone or radiation therapy. In our series 3 such patients have been followed whose masses disappeared clinically but not on mammography. The response in 1 patient was dramatic after 1 week on estrogen therapy, with a clinically negative breast and a 50 per cent radiographic decrease in size of the breast mass. This could have been mistakenly judged as a complete disappearance were it not for mammography.

Opposite breast survey. The opposite breast is always of concern to the surgeon planning mastectomy. Simultaneous bilateral carcinomas are reported to occur in 0.1 to 1.5 per cent of patients.[14] Successive independent carcinomas occur in 1 to 5 per cent of patients.[14] The patient who has had a radical mastectomy for carcinoma of the breast is more likely to develop carcinoma of the opposite breast than women in the age-controlled population. This figure is variously stated as representing 6 to 8 per cent of mastectomized females.[14] It would appear that survey of the opposite breast in the mastectomized patient is more rewarding than mammography of the general population. Since the cancer patient who has had a mastectomy is more apprehensive about changes in the opposite breast, mammography is of definite value in eliminating this anxiety and at the same time may unveil or eliminate an occult malignant tumor.

Other possible indications for mammography would include some of those proposed by Egan.[11] Selection of anesthesia may be safely determined by mammographic findings. For example, anesthesia may be local or short-acting without endotracheal tubing for the definitely benign lesion. Conversely, more extensive preparation will be necessary for the malignant lesion. With multiple tumors the mammograms may serve as a guide to small nonpalpable lesions and also direct greatest attention to the suspicious lesion(s). Mammography may be the basis for mastectomy if an occult contralateral carcinoma is discovered at the time of a planned ipsilateral radical operation. If the contralateral breast (proven by biopsy to suggest carcinoma in situ) has the same roentgen appearance of the opposite breast, mastectomy could be entertained on these findings. All of the above methods could probably be included in its worth as an aid in treatment planning and bear no further comment.

Conclusions

The technique of soft-tissue mammography serves as a valuable adjunct method for the

(Continued on page 456)

Milk Allergy in Young Infants

ROLAND B. SCOTT, M.D., F.A.A.P.

Professor and Head, Department of Pediatrics, Howard University College of Medicine; Chief Pediatrician, Freedmen's Hospital, Washington

CLEIN[1] AND OTHERS have pointed out that milk is a common cause of allergy in infancy. Clein states that approximately 1 out of every 15 infants is allergic to cow's milk in some degree. In his series of 140 infants 14 different symptoms were encountered, with the most common being eczema (59), pylorospasm (54), colic (40), irritability (27), and diarrhea (33). Symptoms less commonly encountered were cough, choking and gasping, nose cold, constipation, asthma, anorexia, and sneezing spells.

Fries and his co-workers[2] employing roentgenographic technique and allergen-barium mixture have demonstrated gastric retention, abnormal intestinal motility and pyloric spasm in children suffering from gastrointestinal food allergy.

Factors which predispose the young infant to cow's milk allergy are:

1. Hereditary allergic background.
2. Consumption of excessively large amounts of milk by the mother during gestation (may sensitize the fetus in utero).
3. Rapid growth of young infants whose nutritional needs are often satisfied by the introduction of large amounts of foreign protein in the form of cow's milk.
4. The extensive epithelial surface of the gastrointestinal tract with its large absorptive area and abundance of smooth muscle.
5. Occasional feeding of raw milk during early infancy when the intestinal tract is more permeable and before balance between the 2 components of the autonomic nervous system is completely attained. Glaser[3] has referred to this early period as one of immunologic immaturity.
6. The present trend away from breast-feeding and the widespread substitution of cow's milk particularly in the U.S.A.
7. The cumulative factor of repeated consumption of foreign protein in cow's milk.

Allergic reaction to milk may be classified as immediate, intermediate, or delayed with respect to time of onset of symptoms after ingestion. In the immediate variety the relationships between cause and effect is obvious and diagnosis is readily made even by the parent. When symptoms are delayed the correct diagnosis may be obscured to both parent and physician. In the latter case the infant is likely to be subjected to frequent and repeated changes from 1 proprietary brand of cow's milk to another without expected relief of symptoms.

With respect to intensity of symptoms there is wide variation. Some infants express their discomfort in the form of "crabbiness," irritability, or colic, whereas others manifest anaphylactic-like phenomena, such as vomiting, prostration, and even shock. In 1920 Park[4] described a young infant who was so exquisitely allergic to cow's milk that 2 to 3 drops of sweetened condensed milk given by mouth was followed in 3 hours by drowsiness, vomiting, pallor, dyspnea, cyanosis, diarrhea, and prostration. Even 1 drop of a 1–100 dilution of cow's milk evoked a delayed general reaction (4 hours) of drowsiness, vomiting, and diarrhea when applied to the infant's scarified skin. Despite the systemic reaction the skin test remained negative.

Vendel[5] reported 24 similar cases from 4 children's hospitals in Stockholm. He divided his cases into 2 categories:

1. Cases in which the allergic attack came on several hours after exposure to ingested milk and symptoms were limited to the intestines and circulatory system. Skin tests to milk protein were usually negative in this group.
2. Cases expressing immediate reaction within minutes or seconds after ingestion of cow's milk. In addition to gastrointestinal symptoms asthma and urticaria often appeared. Passive transfer tests (Prausnitz-Kustner reactions) were usually positive for milk protein in this group of cases. Vendel describes a program of desensitization by mouth requiring 14 days for completion of the initial phase.

Recently Diner, Kniker, Sears and Heiner[6, 7] have described a syndrome of roentgenologic manifestations of chronic respiratory disease in infants with multiple circulating precipitins to cow's milk. The infants exhibited cough, wheezing, recurrent or continuous episodes of coryza, and poor weight gain. These findings were associated clinically with the ingestion of cow's milk products.

This clinical presentation comprises a group of 34 infants who were observed during a period of 18 months. These infants presented a varied but surprisingly characteristic symptom-complex which we attributed to milk allergy. With the exception of 1 5-month-old child all of the infants were less than 8 weeks of age when they first came under observation. Most of the infants developed their initial symptoms between 1 and 3 weeks of age.

There were 20 females and 14 males. Twenty-two were first-born children. There was a definite family history of allergy in antecedents or siblings in 19 and a questionable positive family history of allergy in 7 additional cases. At the time of first observation 30 were artificially fed on cow's milk formulas and only 4 were alleged to be breast-fed.

All of the infants were given a complete physical examination including periodic weighing, measuring, etc. Hemogram, urinalysis and other special studies were obtained only as the particular need indicated. Routine skin-testing was not done. The clinical criteria for the diagnosis of milk allergy as outlined by Clein,[1] Glaser,[8] Rothman[9] and White[10] were accepted as proof of the antigen-antibody mechanism involved.

In brief, these clinical criteria are (1) prompt relief of symptoms by complete removal of cow's milk from the diet, and (2) return of symptoms when cow's milk was reintroduced.

Numerous observers have pointed out the dubious value of skin tests by direct or indirect technique in gastrointestinal allergy. A positive cutaneous reaction does not necessarily indicate gastrointestinal mucous-membrane sensitivity, nor is the latter excluded by a negative skin test reaction. Gastrointestinal roentgenologic studies with the suspected allergen contained in the barium are experimentally interesting and valuable but are rarely needed in the age period under consideration in this clinical study.

Symptoms

The most commonly observed symptoms in the syndrome are listed in table 1.

TABLE 1. Symptoms of Cow's Milk Allergy as Observed in 34 Infants

	No. Cases
1. Colic (excessive gas and crying, irritability, restlessness, 'poor sleepers')	32
a. Pylorospasm (excessive spitting, vomiting, regurgitation)	15
b. Enterospasm (abnormal bowel habits):	
Frequent loose mucoid stools	21
Infrequent hard stools	13
c. Perianal excoriation and/or fissures	9
2. Eczematous rashes (mild to severe)	30
3. Oronasal signs	
a. Nasal congestion (continuous "cold in head" or stuffy nose)	22
b. Excess mucus in throat	6
c. Continuous hyperemia of oropharynx (red throat)	13
4. Conjunctival irritation (nonbacterial)	6
5. Asthma	4
6. Hay fever	2

Illustrative Case

L. E., a male infant, first came under observation at the age of 6 weeks because of general irritability and intense crying while feeding. He was the first born of presumably normal young parents. Delivery was normal, and the birth weight was 6 lbs., 11 ozs. There was a family history of perennial allergic rhinitis in the mother, asthma in the maternal grandmother, and seasonal hay fever in a maternal aunt.

The infant was breast-fed exclusively for the first 4 days of life, but his appetite was so voracious that the mother requested a supplementary formula, and her doctor prescribed evaporated milk, water, and a corn syrup. At the age of 2 weeks breast-feeding was discontinued completely. When the evaporated milk mixture was started on the fifth day of life the mother observed that the child cried continuously during the feeding and thrashed about nervously with his hands. At the age of 2 weeks colic was so distressing that her doctor changed the baby to SMA powder and water. This was used for 1 week without improvement in symptoms. In the meanwhile excessive mucus had appeared in both the throat and in the stools, and an eczematous rash had made recent appearance on the face, neck and scalp. The infant was always restless and irritable and slept poorly.

The rest-broken mother again consulted the same physician, who made the dietary changes when the baby was 4 weeks old. Orange juice, which had been introduced at 2 weeks, was discontinued and aqueous polyvitamin drops were substituted. The mother was instructed to give the baby oatmeal cereal and strained beef, but the latter was completely refused by the infant.

This regimen was continued for a week with no particularly salutary effect. At the age of 5 weeks the physician withdrew the evaporated cow's milk mixture and substituted a soybean formula, which was used for 1 week with improvement in both the colicky symptoms and the eczema. However, the stools became quite loose and frequent, at which time the mother decided to change physicians.

The infant came under observation at the age of 6 weeks. He weighed 9½ pounds and his general nutrition was good. Positive findings were an eczematous rash involving the face, neck and scalp, turgescent nasal mucosa, a red throat, and perianal irritation with 2 small fissures in ano. Management consisted in substitution of Nutramigen* for the soybean formula, temporary omission of the cereal, and continuation of the vitamin drops. Vioform® ointment (1½ per cent) was prescribed for the eczema, and the mother was given some preliminary instructions in environmental allergen control. The mother called the next day and volunteered the information that for the first time in his life the baby had slept continuously for 8 hours during the night.

Comment

The symptoms in these cases in terms of clinical expression can be roughly divided into 4 categories or systems—gastrointestinal, cutaneous, respiratory, and behavior pattern. The irritability, restlessness and gastrointestinal symptoms usually appeared first in the syndrome (usually between 1 and 3 weeks of life). Typically the infants were unusually gaseous, poor sleepers, and apparently always hungry but seemingly deriving less than the expected satisfaction from either food (cow's milk) or sedatives (barbiturates, paregoric, or antihistamines). Stools were often frequent and loose and contained excess mucus. Not infrequently there was a peculiar alternation between "diarrhea" and "constipation." They spat up their milk frequently but rarely vomited projectively.

Eczema was the second most frequent sign and eventually appeared in 30 of our cases. In some infants the rash appeared simultaneously with signs of colic. More characteristically, however, it appeared some weeks later, often when signs of colic were beginning to wane. Sites of predilection for the rash were face, scalp, flexures and extremities. Some infants exhibited a superimposed ammoniacal contact dermatitis in the diaper region. Others showed a well-circumscribed perianal irritation or maceration of local tissues.

The respiratory complaints of "continuous cold in the head" or a perennial "stuffy nose" interfering with breathing were particularly disturbing to parents. These young infants appeared to "keep a red throat," and in those cases where cow's milk remained in the diet for 6 months or more, frequent chest colds often with "rattling" and "wheezy" breathing developed. After the first 6 months of life it appeared that the intolerance to cow's milk was on the wane in some of the infants, probably because of chance desensitization, whereas new allergies, particularly those involving the lower respiratory tract, appeared on the horizon.

The diagnosis of this syndrome is not difficult if one keeps in mind the composite clinical picture. The symptoms usually disappear and reappear with dramatic promptness when cow's milk is withdrawn and reintroduced in the diet as a diagnostic test.

Whereas the syndrome may be more frequently encountered now due to the present popularity of cow's milk in artificial feeding, the condition itself is not one of recent vintage. The antigen-antibody mechanism has not always been appreciated. Over a period of years, at least some of these infants have carried such diagnostic tags as "exudative diathesis" (Czerny), "milk injury" (Czerny), "neuropathic and psychogenic diathesis," "hypertonic infant,"[11] "feeding problem," "vagotonia," "status lymphaticus," and so forth.

The failure of clinicians to consider allergy as a possible factor in the above-named diagnostic compartments is not surprising in view of the scanty recognition given gastrointestinal allergy in young infants even in recent editions of modern pediatric textbooks.

The following conditions may be considered in the differential diagnosis: (a) errors in technique of feeding, (b) pyloric stenosis and partial intestinal obstruction, (c) rumination, (d) obscure enteral and parenteral infections, (e) air-swallowing or aerophagia, (f) congenital megacolon, (g) celiac disease, (h) cystic fibrosis of the pancreas, (i) congenital occlusion of nasal choanae, (j) double aortic arch, and (k) anomaly or a foreign body in the tracheobronchial tree.

Treatment

Eventually practically all of these children lose their intolerance to milk. After reaching 1 year of age most of them can consume moderate amounts of milk with impunity. Ratner[12] has described in detail a plan for both the active and preventive treatment of milk allergy. He stressed the use of heat-treated milk and the need for the pregnant mother to avoid excessive consumption of raw milk in order to prevent prenatal sensitization of the fetus.

Rowe,[13] Stuart,[14] and Glaser[15] have described strained meat formulas which may be successfully substituted for cow's milk. Hill,[16] Clein,[1] and Glaser[3] have also demonstrated the value of soybean milk for these patients. The chief disadvantage of soybean milk is that some babies develop vomiting, diarrhea, and excoriated buttocks when fed this product. Hill,[17] Glaser,[15] and Johnstone and Glaser[18] have discussed the prophylactic value of the early use of soybean milk in the feeding of potentially allergic infants.

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* Product of Mead Johnson Laboratories, Evansville, Ind.

The infants in this study who exhibited allergy to cow's milk formulas (usually fed in the form of evaporated milk-water-corn syrup mixtures) were routinely placed on a predigested casein hydrolysate (Nutramigen) formulation. This product was tolerated uniformly well, and the clinical results were highly satisfactory. General improvement in the infants' condition was usually evident within a matter of 12 to 24 hours. When this product was substituted for cow's milk the colicky symptoms promptly disappeared and the babies became more restful and contented and ceased to spit up their feedings. Stool habits were more satisfactory. In some instances the milder eczematous rashes cleared up within a few days.

Summary

A clinical study involving 34 infants who exhibited allergy to cow's milk has been presented. Initial symptoms usually appeared between 1 and 3 weeks of life.

The symptoms were related chiefly to the gastrointestinal tract, the skin, and the upper respiratory tract. They disappeared and reappeared promptly when cow's milk was completely removed and reintroduced into the infants' diets.

A predigested casein hydrolysate (Nutramigen) was found to be eminently satisfactory as a substitute for cow's milk.

The syndrome caused by allergy to cow's milk is probably more common than is generally suspected and is worthy of serious consideration on the part of clinicians caring for young infants.

The indiscriminate use of so-called hypoallergenic milks for all forms of infantile colic is unwarranted. The comparative incidence or ratio of colic of allergic origin (particularly cow's milk sensitivity) to other forms of colic (non-allergic) is approximately 1 to 10.

Addendum: Following the completion of this manuscript the comprehensive article on milk allergy by Goldman et al[19] appeared. These authors reported 89 cases which satisfied their criteria for the diagnosis of milk allergy. Forty-five of their subjects were challenged with both milk and the individual milk proteins (casein, beta-lactoglobulin, alpha-lactoglobulin, and serum albumin). The other 44 children were challenged with milk only. The chief symptoms exhibited by the milk-sensitive children were rhinitis, asthma, atopic dermatitis, vomiting, abdominal pain, and diarrhea. Following oral challenge the reactions usually appeared within the first 12 to 24 hours, but some reactions occurred within a few minutes while others required 2 days or more for recognition. Most of these patients were thought to be allergic during the first 2 years of life.

Experimentally, Cole and Dees[20] have recently shown that skim milk, evaporated milk, a proprietary formula of equal parts of casein and demineralized whey (S-26), and individual milk proteins are all capable of producing anaphylaxis of varying degrees in sensitized guinea pigs.

Further studies by Goldman and co-workers[21] on milk allergy revealed a close correlation between the results of strongly positive skin tests and the results of oral challenge with the same milk protein.

Saperstein et al[22] found no significant differences relative to coated tanned-cell hemagglutinin titer or the presence of precipitating antibody as measured by gel diffusion for milk protein in the sera of milk-allergic children, children allergic to substances other than milk, and normal children. However, the passive cutaneous anaphylaxis test revealed a high percentage of positive responses with sera from milk-allergic individuals only.

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Peritoneal Tap—Use and Abuse

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During the past few years the use of peritoneal tap to aid in the diagnosis of acute abdominal problems has been proposed. On occasion, apparently this procedure has been utilized unnecessarily. This is particularly true in cases in which the history and physical examination point toward a specific diagnosis. Adequate clinical evaluation of the patient most often precludes the necessity of peritoneal tap for diagnosis. Too great reliance in diagnostic abdominal paracentesis often causes the clinician to be less thorough with his examination of the patient. Moreover, some taps are completely misleading and may lead the unwary clinician astray.

However, there are some definitive indications for peritoneal tap. The 3 chief indications are: (a) cases of blunt trauma to the abdomen, (b) comatose patients with possible abdominal injuries, and (c) confusing abdominal problems.[1] It is well to remember, however, that a negative tap is usually of little value and that a serious intra-abdominal pathologic condition may exist. However, the negative tap may be of value when correlated with the clinical picture as in medical conditions which simulate the acute surgical abdomen. On the other hand, a positive tap is of immense value, although a false positive may be obtained as from aspirating a retroperitoneal hematoma.

We use a simplified technique similar to that of Moretz and Erickson.[2] The patient lies on his side for a few minutes with the site to be used in a dependent position. The midline of the involved quadrant is chosen for the tap. The skin is prepared in an acceptable manner and 1 per cent Xylocaine® or procaine is injected in the chosen site. A 17- or 18-gauge spinal needle is inserted into the peritoneal cavity. The syringe is then aspirated. All 4 quadrants may be used, if necessary, to obtain fluid. Bilateral flank sites may also be used. Study of the aspirated fluid is very important and it should be examined for its gross and microscopic (including gram stain) appearance, color, odor, pH, hemoglobin and amylase content. Blood is also observed for its clotting ability. Certain precautions should be observed: (1) avoidance of previous operative scars, (2) avoidance of the inferior epigastric vessels, (3) avoidance of the liver, kidney and spleen, and (4) emptiness of the bladder. Abdominal distention and previous laparotomy are not contraindications.

Peritoneal tap seems to be a relatively safe procedure. Moretz and Erickson[2] demonstrated with canine experiments that fresh needle punctures of the large and small bowel withstood, without leakage, intraluminal pressures many times that of any conceivable normally occurring intraluminal pressure. Nenhof and Cohen[3] in an experience with more than 100 taps did not observe a single instance of injury to the intestine. Moreover, observation reveals that even if the needle enters the intestine no harm results.

Mansberger[4] emphasized the value of elevated ammonia levels in the peritoneal fluid of patients with acute abdominal problems. He stated that ammonia levels above 3.0 micrograms per ml. suggest strangulated, perforated or lacerated small or large intestine, perforated gastric or duodenal ulcer, or urinary extravasation. Ammonia levels were not elevated above 3.0 micrograms per ml. in pancreatitis or lesions producing gross intraperitoneal hemorrhage. In the latter instance hematocrit determinations are of value in detecting gross intraperitoneal hemorrhage. We have not utilized the determination of ammonia levels on abdominal fluid.

The amylase content of peritoneal fluid may be elevated in conditions other than pancreatitis, although the highest values occur in this condition. Significant levels are also noted in perforated duodenal ulcer, in strangulated small bowel with or without perforation, and occasionally in perforated appendicitis.[5]

Intestinal infarction is suggested by fluid (1) of reddish-brown appearance, (2) of fetid odor, (3) with positive *E. coli* culture (gram-negative rods on Gram stain), and (4) with increased serum amylase content (usually over 1,000 Somogyi units). In pancreatitis the aspirated fluid contains increased amylase and white cells but no gram-negative bacilli or fecal odor.[5]

We have employed peritoneal tap sparingly. With careful clinical evaluation of the patient the physician can usually make the correct diagnosis. Proper treatment may then be instituted. Despite the apparent safety of diagnostic abdominal paracentesis the tap may be negative or, even worse, misleading. There are indications for the employment of peritoneal tap in which it may be of definite value for the evaluation of the case. However, these instances are few.

Even when peritoneal tap is employed, correlation of the tap findings with the clinical situation is essential. If this correlation is not made, serious errors may result.

Summary

There are 3 chief indications for peritoneal tap: (1) cases of blunt trauma to the abdomen, (2) comatose patients with possible abdominal injuries, and (3) confusing abdominal problems. Although this diagnostic procedure appears to be a safe one, it may be negative or misleading. Careful clinical evaluation of the patient even in the 3 categories listed usually makes peritoneal tap unnecessary. However, when diagnostic abdominal paracentesis is performed, careful correlation of the tap findings and the clinical condition is important.

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Soft-tissue Mammography—Funderburk et al

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diagnosis of cancer of the breast. Once the diagnostic criteria of malignancy are firmly established and observed to consistently occur in breast lesions, mammography may prove to be as reliable as the microscopic diagnosis. The potentiality of this accuracy and the resulting decrease of manipulation of the tumor mass with the shorter operative time certainly should be advantageous.

Our technique, adapted after Egan, has proven to be reproducible with impressive reliability. The differentiation of benign and malignant lesions by mammography appears to be more accurate than clinical diagnosis.

Significant application of the procedure lies in its use in the discovery of occult carcinomas, the diagnosis of the mass in which there is clinical uncertainty, and the selection of the proper tissue for pathologic examination.

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Perforation of the Stomach in the Newborn

Report of Three Cases

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SPONTANEOUS RUPTURE of the stomach in the newborn is a rare but well documented entity. Since 1825 when Siebold[1] reported the first case of spontaneous gastric rupture in infancy approximately 100 cases of this condition have been recorded in the English literature. The first attempt to repair a gastric perforation in a newborn infant was reported by Stern and associates[2] in 1929. Unfortunately, perforation recurred 48 hours later and the infant succumbed. In 1932 Selinger[3] successfully repaired a gastric perforation in a 3-month-old baby, but it was not until 1950 that Leger et al[4] reported the first newborn to survive operation for gastric perforation.

In 1955 Vargas and associates[5] presented an excellent review of the literature on this subject and collected 22 recorded cases of perforation of the stomach in newborns who were surgically treated. Only 9 of these infants survived. In addition Vargas et al reported 11 cases of their own, 8 of whom were surgically treated, but only 2 of whom survived. In 1959 Linkner and Benson[6] reported 13 surgically treated cases with 6 survivals.

The purpose of this communication is to report 3 cases of gastric perforation in newborns in order to reëmphasize the need for prompt diagnosis and early surgical intervention.

Report of Cases

Case 1. D. J., a full-term Negro male, was received in the newborn nursery in apparently good condition. The mother was Para IV, gravida V, and all of her previous children were living and well. The delivery was spontaneous with no complications, and the birth weight was 8 lbs., 5½ ozs. The infant had 3 meconium stools on the day following delivery. Thirty-six hours after delivery bile-stained vomitus and moderate abdominal distention were noted. Gastric lavage with saline was performed at this time. The chest was clear, bowel sounds were present, and the temperature at this time was 100.8°F. Vomiting continued, and within 4 hours the temperature had risen to 104.2°F. Bowel sounds were absent, and abdominal distention was now marked. Respirations were labored and shallow, and cyanosis was noted. A hemogram at this time revealed a white blood cell count of 5,000, a hematocrit of 51 per cent, and a hemoglobin of 19.5 Gm. Continuous gastric suction was begun, a blood culture was prepared, and venoclysis was begun with chloramphenicol. A supine X-ray film made 42 hours after delivery (6 hours after the onset of symptoms) was suggestive of pneumoperitoneum. A subsequent upright X-ray film of the abdomen revealed massive pneumoperitoneum. The infant's condition rapidly deteriorated, with cyanosis becoming increasingly severe, and he expired before surgery could be undertaken, approximately 7 hours after the onset of symptoms.

At autopsy the stomach was found to contain hemorrhagic fluid. At 1.5 cm. below the esophagogastric junction a 0.4 cm. perforation along the greater curvature of the stomach was noted. The serosal surface was heavily coated by fibrinopurulent exudate. Microscopic sections of the stomach revealed hemorrhagic necrosis in the vicinity of the perforation. The musculature of the stomach was absent at the margin of the tear, and multiple sections from the intact stomach near the vicinity of the perforation showed either absence or thinning of the musculature.

In all probability rupture of the stomach occurred when abdominal distention was first noted, and an upright X-ray film of the abdomen might have confirmed this even before marked distention was noted. The cause of death in this infant was respiratory embarrassment due to massive pneumoperitoneum.

Case 2. V. H., a premature Negro male, was delivered by elective cesarean section without any apparent complications during delivery. The birth weight was 5 lbs., 1¼ ozs. Physical examination at birth revealed no unusual findings. Routine gastric aspiration was done with ease. Shortly after birth the infant developed cyanosis which improved with frequent suctioning. On the day after birth a meconium stool was passed, and thereafter stools were passed daily. On the third day of life the infant began vomiting bile-stained material, but no distention was noted. X-ray films of the abdomen and chest at this time were negative. No further feedings by mouth were attempted. Fluids were administered by hypodermoclysis and gastric gavage. On the fifth day the abdomen was noted to be markedly distended and tympanitic and the infant began having respiratory distress. The temperature at this time was 100°F. An X-ray film made the following day showed massive pneumoperitoneum. A surgical consultation was obtained, but the infant expired before any definitive procedure could be undertaken.

At autopsy a single perforation measuring 1.5 cm. was found on the anterior surface of the body of the stomach toward the greater curvature side. Generalized peritonitis was present.

Delay in obtaining an X-ray film of the abdomen when distention was first noted prevented earlier diagnosis. The cause of death in this case also was respiratory embarrassment due to massive pneumoperitoneum.

Case 3. C. J., a premature Negro male infant, was delivered spontaneously of a mother whose membranes had ruptured some 72 hours prior to delivery. There was evidence that the infant was in distress prior to delivery in that the fetal heart rate varied between 108 and 120 per minute. Resuscitation of the infant was necessary at birth, and adequate respiratory excursions were not obtained for 20 minutes. The birth weight was 4 lbs., 15½ ozs. Because of the presence of ruptured membranes 72 hours prior to delivery, penicillin, 50,000 units, and streptomycin, 20 mg., were administered daily as a prophylactic measure. The infant was placed in an incubator. Gastric aspiration immediately after birth yielded 5 c.c. of yellowish-white mucoid material. Feedings of glucose and water were begun on the day after birth, and regular formula was given thereafter. Respirations were never strong and regular, and intermittent periods of cyanosis were noted. Meconium stools were passed on the second day of life and daily thereafter. On the fifth day of life the infant was noted to be more lethargic and the sclerae icteric. The lungs were clear. The abdomen was distended but soft, and no bowel sounds were heard. Respirations were labored, and the temperature was 102°F. A hemogram at this time revealed a white blood cell count of 25,400, a hematocrit of 43 per cent, and a hemoglobin of 19.5 Gm. Direct Coombs' examination was negative.

Shortly after the abdominal distention was observed the infant began vomiting bile-stained material. An X-ray film of the abdomen at this time revealed massive pneumoperitoneum. Venoclysis was begun, continuous nasogastric suction was instituted, and the infant was carried to surgery.

Abdominal exploration under local anesthesia was performed through a midline incision. The peritoneal cavity was noted to contain a large amount of bile-stained fluid and milk curds. A linear perforation in the stomach measuring 4.5 cm. in length was noted on the anterior surface of the stomach near the greater curvature. There was no evidence of duodenal obstruction. The perforation was closed in 2 layers with no. 4–0 chromic catgut and no. 4–0 black silk and the abdomen closed in layers. Postoperatively the infant was given tetracycline intravenously and other supportive measures but died 6 hours after surgery.

At autopsy generalized peritonitis was noted. The serosal surface of the stomach was partially covered with purulent exudate. The closed perforation in the stomach was noted. Serial sections of the intact stomach showed destruction of the mucosa and marked congestion of the submucosa.

Death in this instance probably resulted from vascular collapse as a result of fluid loss into the peritoneal cavity due to the peritonitis.

Discussion

Spontaneous perforation of the stomach in all probability occurs much more frequently than is recognized. There is much conjecture as to the etiology in the newborn, and a review of the literature indicates that this condition may occur as a result of any of several conditions.

Gastric perforations resulting from the use of nasogastric tubes for aspiration or gavage feeding have been reported.[6-10] In many hospitals (as in ours) gastric aspiration has become part of the routine examination of newborn infants in order to detect possible congenital malformations such as tracheo-esophageal fistulae, duodenal atresias, etc.

Overwhelming septicemia with septic embolization and resultant necrosis of the gastric wall has been advanced as an etiologic factor, especially by Vargas[5] and Linkner.[6]

Craig[11] and other authors have considered intracranial hemorrhage resulting from birth injury to be the cause of acute gastric ulceration with perforation.

Perforation of the stomach due to distal obstruction has been reported,[12, 13] with the obstruction in these cases occurring at the duodenum, pylorus, or the ileocecal valve.

In 1943 Herbut[14] reported a case of gastric perforation through an area of congenital deficiency in the musculature of the gastric wall. Since then several authors have reported similar cases. Characteristically, the perforations in these cases are linear tears, usually situated along the greater curvature of the stomach, that may be surprisingly large (case 3).

Diagnosis of perforation of the stomach is difficult unless the physician has a high index of suspicion. Most of the infants appear normal at birth. Although all of our cases had vomiting as part of the clinical picture, vomiting is inconstant but if present may be bile-stained. Frank hematemesis occurs rarely. The most striking part of the clinical picture is the suddenness and magnitude of the abdominal distention. The abdomen is soft initially even though it is tense. Shallow respirations and cyanosis rapidly ensue, partly because of irritation of the diaphragm but more importantly because of marked reduction in lung volume. The key to the diagnosis in most cases, however, is finding free air in the peritoneal cavity on an upright or lateral decubitus X-ray film of the abdomen. Obtaining supine and upright X-ray films in adults with abdominal distention is standard procedure, but it must be emphasized that upright or lateral decubitus films should also be obtained in infants with abdominal distention.

Surgery must be undertaken as soon as the diagnosis of a ruptured hollow viscus is made and the infant prepared. Preoperatively a venous cutdown is performed, blood drawn for typing and cross-matching, and a soft nasogastric tube passed. Local anesthesia is preferred since these infants are acutely ill. Oxygen should be administered during the procedure because of reduced lung volume. A midline or paramedian incision may be used. Any milk curds or free fluid should be aspirated and a portion of this saved for culture and sensitivity studies. Statistically, the perforation will occur on the anterior surface of the stomach toward the fundic portion of the greater curvature, but the possibility of multiple perforations, perforations on the posterior aspect of the stomach, and distal obstruction of the remainder of the gut should be kept in mind by the surgeon. The perforation is repaired, the peritoneal cavity irrigated, and the abdomen closed.

Following closure of the perforation warm sterile saline should be instilled through the nasogastric tube to determine the adequacy of the closure and to demonstrate any other perforations.

Postoperatively appropriate fluids and antibiotics should be administered, and continuous nasogastric suction is used until bowel sounds appear. Other general supportive care is given as needed.

Summary

Perforation of the stomach in the newborn though rare is well documented and probably occurs much more frequently than is recognized. Several etiologies have been advanced.

Our experience with gastric perforation in 3 newborns has been presented. Only 1 came to surgery, and none survived.

Early diagnosis and prompt surgical intervention must be accomplished to improve the survival rate.

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Nonfunctioning Cystic Pheochromocytoma

Report of a Case

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PHEOCHROMOCYTOMA or black-celled tumor of the adrenal gland has aroused much interest since Labbé and co-workers publicized the association of paroxysmal hypertension and adrenal tumors in 1922. This is a neoplasm of the adrenal gland composed of chromaffin cells (pheochromocytes) which are normally found in the adrenal medulla. Tumors with histologic characteristics similar to those of pheochromocytoma have been described in the brain, carotid body, and sympathetic chain but are generally classified as "paragangliomas." Tumors in extra-adrenal locations are more likely to be hormonally inactive, and it has been proposed that these be called "chemodectomas."[1]

The clinical syndrome of the functioning pheochromocytoma presents paroxysmal hypertension, headaches, sweating, pallor, lability of the vasomotor mechanisms, vertigo, nausea and vomiting. As experience has accumulated, various other hypertensive symptom-complexes associated with this tumor have been recognized. It is now appreciated that the pheochromocytoma may give rise to clinical manifestations which simulate any of the hypertensive disorders. It is also apparent that a pheochromocytoma may exist in a clinically dormant state or may be associated with signs and symptoms of such subtlety as to go unrecognized until a catastrophe occurs.[1]

The following is a case report of a patient with cystic pheochromocytoma who did not have hypertension or signs of hypermetabolism but whose symptoms were produced by the size of the tumor itself.

Report of Case

A 51-year-old man was admitted to Freedmen's Hospital on March 13, 1963 complaining of vague upper and lower abdominal pain on the right. The pain began 1 year prior to admission. It was described as burning in nature and initially was relieved by ingestion of food. Six months prior to admission the patient noted pain in the right upper quadrant that radiated toward his back and substernal region. This was described as a "gas pain" and was relieved by sitting up but not by food. For the 6 weeks prior to admission the pain had been almost constant. There was no change in bowel or urinary habits. Stool and urine were normal in color.

The blood pressure was 140/90, the pulse rate 84, and the temperature 98.6°F. Significant findings were limited to the abdomen. There was a bulging palpable mass in the right upper quadrant which extended 4 fingerbreadths below the right costal margin and 5 cm. across the midline. The mass was firm, nontender, and smooth. Bowel sounds were normal. Laboratory data were within normal limits. An electrocardiogram showed normal rhythm and no evidence of myocardial disease. A roentgenogram of the chest was normal. Upper gastrointestinal and colon X-ray examinations revealed the presence of extrinsic pressure (figures 1 and 2). A liver scan (figure 3) revealed absence of radioactivity over the right lobe suggesting a liver cyst or displacement of the right lobe by a tumor mass.

On the twelfth hospital day abdominal exploration revealed a large cystic mass arising from the right suprarenal area. When the size of the mass and its relationship to surrounding structures were ascertained the incision was converted to a thoracoabdominal one for adequate exposure. The mass measured about 18 by 14 cm. and was separated from the kidney, inferior vena cava, diaphragm, liver and duodenum by sharp dissection. There were no episodes of hypertension, and blood loss was minimal. The postoperative course was uneventful, and the patient was discharged on the thirteenth postoperative day.

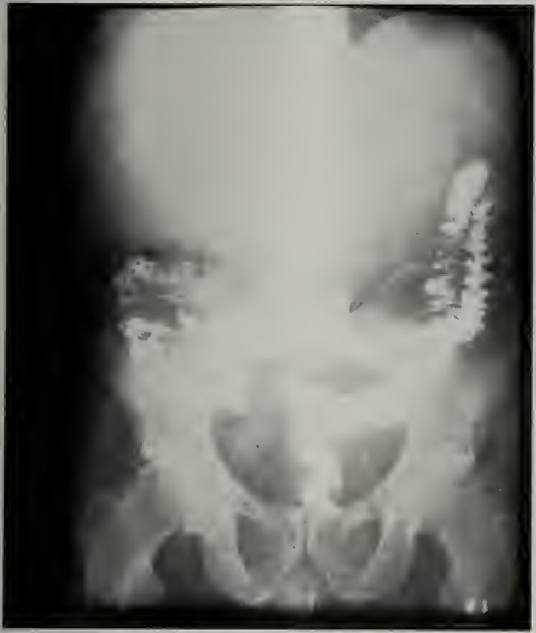

FIG. 1. Downward displacement of right side of colon by retroperitoneal mass.

The gross specimen was a cystic mass which measured 18 by 15 by 14 cm. and weighed 2,200 Gm. The external surface was focally covered by fibrous tags, particularly at the upper pole where it was attached to the liver. On the medial aspect of the tumor there was a yellowish, disc-shaped subcapsular mass of what appeared to be adrenal cortical tissue which measured 2 cm. in diameter and 0.2 cm. in thickness. The cyst cavity was filled with thick bloody fluid which contained brown shreds of coagulum. The cyst wall measured 0.3 to 0.6 cm. in thickness, and the inner lining presented a shaggy rusty-brown friable membranous appearance. The formalin in which the specimen was fixed became a strikingly rust-brown color.

Microscopic study of sections taken from multiple sites on all aspects of the tumor showed that it was of adrenal medullary or paraganglionic origin. The capsule consisted of a compressed lamina of fibrous connective tissue. Beneath this capsule was a zone of pheochromocytoma and scattered foci of adrenal cortical tissue with an admixture of nerve bundles and ganglion cells. The innermost layer consisted of a thick fibrocollagenous cyst wall. Evidences of repeated bleeding episodes in this latter area consisted of abundant deposits of hemosiderin-laden macrophages. The cyst contents consisted mainly of fibrin, but small quantities of fresh blood, lipoid and hemosiderin-laden macrophages and cholesterol clefts were also present. A fairly large focus of adrenal cortical tissue was present in the yellowish nodule located on the medial aspect of the tumor. This focus included compressed zonae glomerulosa and fasciculata, a bit of reticulum, and medullary tissue as well as central veins. The cells were arranged in clusters, sometimes appearing as a syncytium-like, multinucleated giant cell and elsewhere as an organoid pattern often referred to as "endocrine." The tumor cells were large, polygonal, or elliptical with abundant cytoplasm. The cytoplasm was of a granular character and basophilic, with fine pigment granules. The nuclei were usually centrally placed, angular to oval in shape, with a moderate to dense distribution of chromatin which often obscured the nucleolus. Sections stained by Gomori's chromaffin method revealed finely divided reddish granules within the cytoplasm of many of the cells. Mitoses were infrequent, and there was no evidence of vascular invasion. Thus the diagnosis of this tumor as a pheochromocytoma was based on its location within adrenal gland, the slight resemblance of the cells to adrenal medulla, and the positive chromaffin reaction. The tissue was not assayed for adrenalin and noradrenalin.

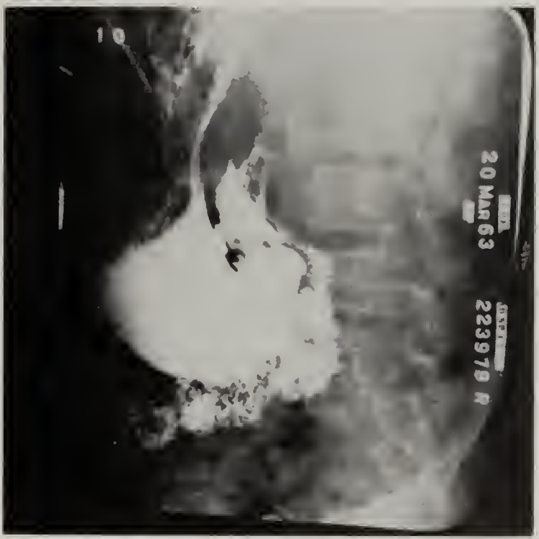

FIG. 2. Evidence of extrinsic pressure on duodenal cap and loop.

Discussion

The literature is replete with discussions of pheochromocytoma. However, perhaps due to a paucity of cases, little mention is made of cystic pheochromocytomas. Colcock and Hull[2] reported a case similar to ours, in which the diagnosis was made from the specimen after surgery. Riddell et al[3] and Bartels and Cattell[4] have each reported a case of cystic pheochromocytoma, although both had some symptoms of hypertension and hypermetabolism. Colcock and Hull's case,[2] on the contrary, was that of a huge cystic pheochromocytoma (weight 3,600 Gm. after the removal of 4,000 to 5,000 c.c. of thick, viscid fluid) with none of the symptoms of pheochromocytoma preoperatively. However, during the final phases of the operation the patient developed unexplained tachycardia and hypertension. At no time preoperatively or during the excision of the large cystic tumor did our patient develop any symptoms to suggest pheochromocytoma.

Pheochromocytoma is a tumor of chromaffin tissue, 90 per cent of which occurs in the adrenal gland itself. The tumors tend to occur bilaterally in 10 per cent of the cases although this tendency to bilaterality is greater in children. In addition to the adrenal medulla, pheochromocytomas may occur in the spleen, ovaries, testes, and bladder wall and in chromaffin tissue along the aorta including the organ of Zuckerkandl. Usually these tumors secrete only norepinephrine. However, in tumors of the adrenal medulla and bladder wall both catecholamines, norepinephrine and epinephrine, are secreted.

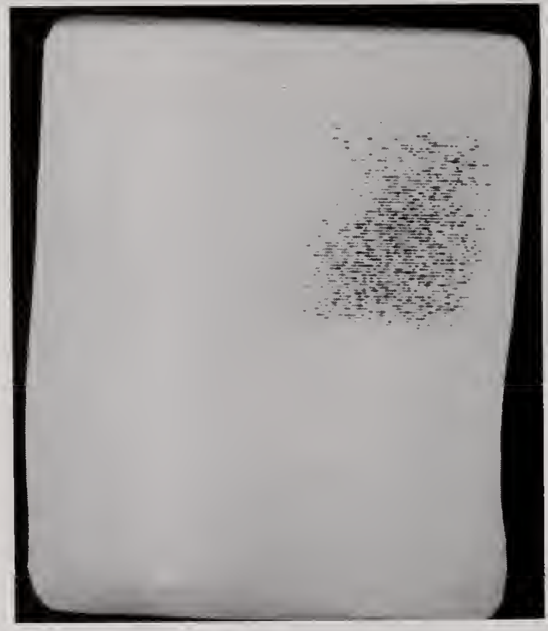

FIG. 3. Liver scanogram revealing absence of radioactivity over right lobe of liver which has been displaced medially by large cystic tumor mass.

Although hypertension, either paroxysmal or sustained, is usually present, occasionally it is absent. However, a pheochromocytoma should be suspected in patients having (1) a continuous hypertension, (2) atypical paroxysmal attacks of hypertension, (3) unexplained hypertensive reactions during induction of anesthesia, (4) unexplained shock during anesthesia in the absence of demonstrable hemorrhage, (5) hypertension with signs of hyperthyroidism including an elevated basal metabolic rate but normal cholesterol and normal protein-bound iodine values, (6) intermittent glycosuria, or (7) acute anxiety attacks.[1] Our patient exhibited none of these symptoms.

The regitine test and the provocative histamine test are helpful in establishing the diagnosis of pheochromocytoma although false positives may occur. The level of the catecholamines in the urine and blood is the most conclusive test for hyperfunction of the adrenal medulla. The determination of the metanephrines, particularly vanillmandelic acid, is also very helpful in the diagnosis of pheochromocytoma.

We believe that our patient's symptoms were secondary to the pressure of the tumor on the stomach, duodenum, liver, and retroperitoneal structures. Abdominal pain relieved by food suggested peptic ulcer disease, but no ulcer was seen on gastrointestinal X-ray films.

The problem of the "asymptomatic" pheochromocytoma is difficult to evaluate. Blacklock's group[5] reported an incidence of 11.8 per cent in their review of 141 cases. The tumor may function at a subclinical level or may be manifested only by hyperglycemia, being activated under conditions of stress as already indicated. In addition, the tumor may exist in a dormant state between paroxysms for varying periods of time and its true level of activity not be appreciated.[4]

Our patient presented no signs or symptoms of pheochromocytoma. Even during manipulation of the tumor hypertension or tachycardia did not occur. Certainly not all cystic pheochromocytomas are functionless.[3, 4] However, our case obviously was not functioning, as manifested by the absence of hypertension or signs of hypermetabolism. Since the diagnosis was not suspected, no catecholamine or vanillmandelic acid determinations were performed.

Summary

We have presented a case of nonfunctioning cystic pheochromocytoma occurring in a 51-year-old Negro. The tumor weighed 2,200 Gm. and measured 18 by 15 by 14 cm. The symptoms were produced by pressure of this large tumor on surrounding structures. At no time did the patient experience any symptoms of hypertension or hypermetabolism.

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The Problem of the Eponym "Todd's Paralysis"

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OVER 90 PER CENT OF CONVULSIONS, with their accompanying sequelae, occur during infancy and childhood.[1] The pediatrician is, therefore, the practitioner who is constantly confronted with the problems of the diagnosis and the prognosis of seizures. The purpose of this communication is to focus attention on those seizures which are usually focal and which may be followed by transient hemiplegia or the so-called Todd's paralysis.[2]

The unpredictable appearance of transient paralysis, of an arm or a leg, which sometimes follows a convulsive seizure, is not an unusual occurrence. This postictal phenomenon was first described in detail by Bravais[3] in 1827 when he wrote his thesis "*Sur les symptomes et le traitement de l'epilepsie hemiplegique.*" Later, in 1854, Todd,[2] in his clinical lectures on "epileptic hemiplegia" discussed similar observations: "The paralytic state remains for a longer or shorter time, varying perhaps from a few minutes or a few hours to 3 or 4 days, or even much longer. It then goes off, or improves, until the next epileptic fit, when a train of phenomena, previously similar, recurs with like result." He also introduced a theory to account for the development of postepileptic paralysis: "Undue exaltation of the polar force induces, subsequently, a state of depression or exhaustion. . . . This state of exhaustion is very apt to continue as one of weakened nutrition, in which the brain tissue is more or less in the condition of white softening." He believed that involvement of the deeper parts of the brain by this process of "exhaustion and white softening" was responsible for the hemiplegic paralysis. He further stated that in this form of hemiplegia the prognosis was in general not satisfactory because its occurrence indicated that the brain had suffered more from the fit than is usual. Perhaps it is because of this latter contribution that the eponym "Todd's palsy" or "Todd's paralysis" appeared in subsequent medical literature.

Following these early efforts to define and delineate this symptom-complex several reports discussing the nature, etiology, and pathogenesis of Todd's paralysis have appeared in the literature. These have been adequately summarized, reviewed, and analyzed by Paparo and Pasetti,[4] Meyer and Portnoy,[5] and Efron.[6] Study of these comprehensive evaluations reveals that Gowers[7] was the only early investigator who disagreed with Todd's theory that neuronal "exhaustion" was responsible for postepileptic paralysis. He postulated some positive inhibitory mechanism and supported this view by pointing to the similarity of the occasional case of epilepsy in which the whole fit was inhibitory or akinetic. Furthermore, it becomes evident that modern investigation concerned itself mainly with attempts to precisely define the physiology of postictal "exhaustion." The final conclusion drawn from the several studies cited from these investigations is that postictal paralysis appears to be due to "anoxia" of the nerve cells involved in the preceding seizure. Meyer and Portnoy[5] urged that their experimental data conclusively proved the correctness of this theory. They also indicated that postictal paralysis is more apt to occur when cerebrovascular disease is present. Efron,[6] however, after careful analysis of the material presented by these investigators argued that they had actually demonstrated the absence of a causal relationship between cortical oxygen tension and duration of seizures. He also pointed out that the case they reported failed to demonstrate a cerebrovascular abnormality. Furthermore, he suggested that the same mechanism is responsible both for inhibitory epilepsy and for postictal inhibition resulting in paralysis. Finally he advanced, as a tentative explanation for both, mechanisms of hyperpolarization. This hypothesis seems to be compatible with the available facts concerning the transmission of excitatory and inhibitory impulses at the synapses.[8, 9]

Although it may not be acceptable to all, Efron in his critique suggested a definition for the "ideal case" of Todd's paralysis. He stated that it was one in which the patient had a nonprogressive neurologic disease and had suffered from focal seizures for many years. He insisted that each seizure had to be followed by a brief paralysis with complete recovery without neurologic abnormalities except in the few hours following a seizure. Finally, he emphasized that no episodes of paralysis, however transient, occurred unless preceded by a seizure. He felt that failure to observe these criteria led to the incorrect reporting of several cases as examples of "Todd's paralysis." He further indicated that because of the associated transient paralysis Bravais[3] and Todd[2] were unable to clearly identify those cases in which a fit ushered in some cerebrovascular accident or was the manifestation of carotid insufficiency. He also distinguished cases in which a progressive cerebral lesion produces what appears to be a transient paralysis, but in which the postictal paralysis does not quite disappear. Under these circumstances each succeeding seizure is followed by an increasing residue of paralysis until a complete hemiplegia results.

With the above points in mind it is now possible to consider the significance of this temporary hemiplegia which sometimes follows focal seizures, febrile convulsions, or several other forms of seizure activity.

Although 5 per cent of patients with cryptogenic epilepsy exhibit a constant pattern of focal seizures, these convulsions occur most commonly in patients with intracranial pathology.[10] It will, therefore, not be controversial to suggest that all focal seizures, particularly those followed by Todd's paralysis, should receive adequate neurologic investigation. The inability of Todd to differentiate the "ideal case" of postepileptic paralysis from the recently documented cerebrovascular and carotid insufficiency syndromes weakened his assertion that the occurrence of postepileptic hemiplegia indicated an unsatisfactory prognosis.

Recently Mitchell[11] declared that distinction between acute hemiplegia in childhood and postconvulsive Todd's paralysis is not easily made. He further claimed that the distinction between postepileptic paralysis and many cases of acute hemiplegia in childhood is not a fundamental one but rather one of degree. "If the etiological agent acts only over a limited period, as in anoxia due to prolonged seizures or to carotid artery insufficiency, the hemiplegia may be permanent or transitory depending on whether there is irreversible neuronal damage or not. In the former case the diagnosis will be acute hemiplegia in childhood, in the latter postepileptic paralysis."

He finally summarized his article by suggesting that when a healthy child suddenly develops convulsions for no apparent reason, critical evaluation of the patient by specific methods of investigation and definitive treatment is indicated. These specific measures are to be instituted if "the convulsions continue for more than 12 hours despite ordinary treatment or coma persists for more than 12 hours after the convulsions have stopped." He thought that, although hemiplegia appearing after a seizure in which these criteria were not fulfilled was generally a postepileptic phenomenon which disappeared rapidly and spontaneously, the probability of the hemiplegia being permanent should be considered.

The excellent discussions of Livingston,[12] Prichard and McGreal,[13] and Schmidt[14] and the literature cited by these authors indicate that there is considerable controversy concerning the significance of febrile convulsions. To help in the elucidation of this problem Livingston distinguished between the simple febrile conclusion and epilepsy precipitated by fever; Prichard and McGreal[13] wrote about simple febrile convulsions and atypical febrile convulsions; Schmidt[14] spoke of convulsions with a favorable ultimate prognosis and those with a less favorable or guarded prognosis. Each of these writers suggested that the febrile convulsions that make up the first group are benign and rarely have complications. On the other hand, those that belong to the second group have a much less favorable prognosis, both with regard to possible complications and to spontaneous afebrile seizures appearing later. The prolonged or focal febrile convulsion followed by Todd's paralysis belongs to the second group. To emphasize the seriousness of this type of seizure, Prichard and McGreal[13] wrote as follows: "A more usual complication is a unilateral deficit. Many prolonged convulsions eventually become asymmetrical. After the seizure is over it is seen that the child has a hemiparesis, the paralysis affecting the side which twitched longer. It is associated with a gross electroencephalographic abnormality, usually slow waves, over the affected hemisphere. The hemiparesis may disappear in a matter of minutes or, more commonly, hours. Occasionally it lasts several days and in some instances is permanent. Even when the clinical recovery is rapid, electroencephalographic changes may be present for weeks or months. They usually disappear but occasionally, after many months or even years, a focal abnormality may again be seen in the same area, but this time spikes are common and are often associated with clinical focal seizures."

The following case illustrates the problems associated with diagnosis, family counseling, management and treatment of a patient who developed postictal paralysis after a febrile convulsion.

Report of Case

A female, aged 2 years and 8 months, was admitted to Freedmen's Hospital on July 3, 1963 because of weakness, anorexia and inability to walk. Three days prior to admission she became anorexic. Twenty-four hours prior to hospitalization she developed a fever of 103.6°F. Shortly after the temperature elevation she vomited and exhibited stiffness and shaking of her extremities and "rolling" of her eyes. She was also incontinent of urine. Approximately 2 hours later she was taken to the office of her private physician where she was given a sponge bath for the control of hyperpyrexia (T. 104°F). Also 300,000 units of penicillin was administered intramuscularly, and a 60 mg. Nembutal® Sodium suppository was inserted in her rectum. At that time the findings were essentially limited to pharyngeal injection and weakness in the grip of each hand. She stood with difficulty and would not take steps. After receiving the alcohol sponge bath the temperature fell to 101°F and she became more alert. The weakness and neurologic signs were attributed to the postictal state (Todd's paresis). She returned home for further observation by her parents.

The following morning she became weaker and was unable to stand or walk without "wobbling and falling." Hospitalization was then advised for additional studies.

The patient had not experienced any of the usual childhood contagious diseases and had generally enjoyed good health. Similar occurrence of convulsive seizures was denied. She had previously received 3 primary immunization inoculations and a "booster" injection without complications. The family history was noncontributory with reference to the child's present illness.

Examination revealed a well-developed and well-nourished child. She was comfortable and afebrile. The salient findings on admission were lethargy, weakness in the muscles of the left hand and left leg, and ataxia which made walking difficult. The temperature was 99.4°F, the pulse rate 128, and the respiratory rate 28.

The white blood cells numbered 5,900 per cu. mm., the hematocrit was 35 per cent, and the urinalysis was negative.

Improvement was rapid. The day following admission, the gait was no longer ataxic, and it was evident that there was no weakness. The child remained afebrile and asymptomatic and was discharged on the sixth day of hospitalization with the diagnosis of postconvulsive paralysis (Todd) associated with an acute afebrile illness, most likely viral in origin.

The consulting neurologist made the following comments:

"The prolonged nature of the convulsion and the weakness of grip and loss of ability to walk for a couple of days afterwards placed this condition outside of the category of 'simple cerebral convulsions.' A focal character is added to the postictal paralysis by her shift from left-handedness to preferential use of her right hand for several days. However, I suspect that we have to regard this as a case of the seizure threshold being lower than average or normal without there necessarily being any local cerebral abnormality. Further, there is no suggestion of progressive disease or of any acute cerebral condition requiring direct intervention at the present time. All of these have to be reconsidered if she regresses in any way or develops any localizing signs or symptoms.

"The electroencephalogram showed a considerable tendency to paroxysmal high voltage, slowing down to 3 per second during sleep. Sleep tracings at this age are debatable regarding the limits of normal, and I imagine that this tracing would be interpreted by different reviewers in different ways. It might be within normal limits or it could be argued that it suggests a general electric instability of the brain which would fit with the concept of a relatively low-seizure threshold."

The neurologist suggested continuous anticonvulsive medication if a similar episode recurred, but for the present this type of regimen will be used intermittently only during intercurrent infections.

Summary

The distinguishing characteristics of Todd's paralysis have been presented and the various theories concerning the nature and etiology of this postictal phenomenon have been mentioned. Present-day knowledge concerning the physiology of neurons, especially that dealing with the transmission of inhibitory impulses at the synapses, supports Efron's hypothesis that mechanisms of hyperpolarization and not neuronal exhaustion or cortical anoxia are responsible for postconvulsive paralysis. It has been pointed out that the inability of the early writers to clearly differentiate Todd's paralysis from the transient paralysis which is often a manifestation of the recently described cerebrovascular and carotid insufficiency syndromes led to cases being er-

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Cerebellar Ataxia as a Neurologic Complication of Varicella in a Child

Chlorpromazine as a Therapeutic Agent

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NEUROLOGIC COMPLICATIONS OF CHICKENPOX are uncommon. When cerebral complications occur in this disease ataxia is more prone to appear than in measles encephalitis. This report describes a case of cerebellar ataxia as a complication in which vomiting and other neurologic symptoms were apparently favorably controlled by chlorpromazine.

Report of Case

A. L., a Negro male child, aged 4 years and 8 months, was admitted on June 29, 1963 because of vomiting and incoördination of arms and legs. He had been in good health until 1 week before, when he developed chickenpox with typical uncomplicated skin lesions. On the fifth day of eruption he began to complain of severe frontal headache and developed vomiting, muscle weakness, and incoördination of his legs. The symptoms rapidly progressed, and on the day of admission he was unable to sit, stand or walk.

Two weeks prior to the onset of the eruption an older sibling had developed chickenpox which was uncomplicated and from which she had recovered completely.

The patient was well-developed, well-nourished, well-oriented and alert. However, he wobbled and fell backward when attempting to sit up. Speech was slow and slightly slurred. The pupils were round, regular, equal and reacted to light and accommodation. The optic fundi were negative. The neck was supple, and the deep tendon reflexes were normal. The cranial nerves were intact. The Kernig, Brudzinski, Hoffmann and Babinski signs were absent. Cutaneous sensitivities to heat, cold and pain were normal. Because of ataxia there was difficulty performing the finger-to-nose test. The temperature was 98°F, the pulse rate 76 per minute, the respiratory rate 20 per minute, and the blood pressure 96/58.

X-ray films of the skull revealed no abnormalities. The cerebrospinal fluid was normal in appearance, and chemical examination showed: glucose 54 mg./100 ml., chloride 123 mEq./L., and protein 15 mg./100 ml. There was no growth on culture of blood or cerebrospinal fluid. The hemoglobin was 10.2 Gm., the hematocrit 30 per cent, and the white blood cell count 10,000 per cu. mm. The blood urea nitrogen was 27 mg. A culture from nasal secretion exhibited *Staphylococcus aureus*, coagulase-positive. An electroencephalogram was normal.

At first the patient became progressively worse. The ataxia which had started as difficulty with the lower extremities progressed to inability to sit and to marked difficulty in coördinating the upper extremities along with the appearance of intentional tremors and "overshooting" and "undershooting" objects. On the third day horizontal nystagmus on right lateral gaze and weakness of the lateral rectus muscle of the left eye developed. The knee jerk, which had been exaggerated at the onset of his illness, became hypoactive. The boy continued to vomit, and intravenous fluids had to be started. The neck became painful and later was resistant to flexion. Speech became slower, scanning, and more indistinct. The sensorium remained clear for the duration of the illness.

On the sixth day the boy was given elixir Bentyl® with phenobarbital for the protracted vomiting, but no response was observed. On the seventh day lumbar puncture was repeated. The fluid was essentially normal except for low pressure. The same day the patient was placed on chlorpromazine (Thorazine®) suppositories in dosage of 12.5 mg. every 8 hours. The following day the dose was changed to 16 mg. twice daily, at 7 a.m. and 3 p.m. The vomiting ceased after 24 hours of chlorpromazine medication. Improvement was also observed in the tremors of the hands at the same time, and progress in speech was noted the following day. On the eleventh day the boy was able to sit up, and on the twelfth day he could stand. On the thirteenth day the dose of chlorpromazine was decreased to 16 mg. once daily for 2 days and then discontinued. Neurologic findings continued to improve. When the boy was discharged on the eighteenth day there was only slight ataxia on walking and the speech was greatly improved. There was no tremor or nystagmus. The boy was afebrile during hospitalization.

Discussion

Most cases of chickenpox follow their normal course without complication. In the series of Bullowa and Wishik[1] complications occurred in 5.2 per cent of 2,534 cases. The usual complications were local bacterial infections such as otitis media, abscess, suppurative lymphadenitis, pyodermia, cellulitis and erysipelas. The incidence of neurologic complications was 0.2 per cent.

In the series of Appelbaum et al,[2] neurologic complications were observed in 59 (0.26 per cent) of 6,774 hospitalized patients. Goldston et al[3] stated that the incidence of encephalitis was 0.75 per cent among 800 cases observed at the Mayo Clinic from 1950 to 1961. In general practice, neurologic complications are probably far less common than this observation on hospitalized patients. Levin[4] estimated that every year 1 child in about 3,000,000 people will get encephalitis as a complication following chickenpox.

Preëruptive neurologic complications of varicella have also been observed. Goldston et al[3] found 15 cases of preëruptive neurologic complications in the literature from 1873 to 1960 and presented the sixteenth case.

Cerebellar ataxia as a form of neurologic complication was observed in about one-third of 59 cases in the series of Appelbaum[2] and one-fourth of 120 cases in the review of Underwood.[5] Goldston[3] stated that 1 out of 16 cases with preeruptive neurologic complications of varicella had cerebellar ataxia.

Boys appear to be more susceptible to cerebral complications. Seventy per cent of the patients with neurologic complications in the series of Appelbaum[2] and 61 per cent in the review of Underwood[5] were male. The cases with cerebellar ataxia presented by Goldston[3] and Levin[4] were also male.

Mortality rate from neurologic complications was 5 per cent (3 out of 59) in Appelbaum's series[2] in which all of the deaths involved male patients. The mortality was 40 per cent among the 5 patients in Bullowa's group.[1] In the review of Underwood[5] the mortality rate was 30 per cent in patients with convulsions and 40 per cent in those with coma. Meade[6] stated that mortality in cases complicated by cerebellar ataxia is at least 10 per cent. In the review of Underwood[5] only 1 death (3.5 per cent) occurred among 29 cases of cerebellar ataxia. Out of 33 patients followed by Appelbaum[2] there was no residual sequelae noted 3 years after the disease in 23. There are reports of deaths in children who were receiving steroids when they developed chickenpox.[7, 8, 9]

At present there is no specific treatment for chickenpox or for its neurologic complications.[10] In our case chlorpromazine was effective in the symptomatic control of vomiting. There was also an improvement in speech, mood and muscular control and coördination. The pharmacologic properties of chlorpromazine (Thorazine) as a tranquilizer and an antiemetic are well known. Whether this drug had any other direct effect in our case we do not know.

Summary

A case of varicella complicated by cerebellar ataxia has been presented. The neurologic complications of this common childhood disease are rare. About 25 to 30 per cent of these neurologic complications are in the form of cerebellar ataxia. The incidence of mortality from the neurologic complications varies from 3 to 40 per cent. Mortality is especially high in patients with convulsions and coma. Residual sequelae have been observed in about 30 per cent of the patients reported in the literature.

In our case we employed chlorpromazine for 8 days beginning on the sixth day of a neurologic complication characterized by vomiting, tremors, ataxia, muscular incoördination, and impaired speech. Vomiting was satisfactorily controlled by the drug, which probably also had a favorable effect on the other neurologic complications. We think that the effect of chlorpromazine on the neurologic complications of varicella needs further evaluation.

Acknowledgment: Dr. Jesse B. Barber, Chief of the Division of Neurosurgery, provided the neurologic evaluation of the patient described in this report.

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Combined Intra- and Extra-uterine Pregnancies with Term Delivery of a Hydrocephalic Fetus

Report of a Case

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In 1957 there were 466 documented cases of combined pregnancy.[1] Schaefer[2] presented 4 additional cases in 1962. He pointed out the discrepancies which may arise in the recognition of such cases. There are instances in which the extra-uterine pregnancy was treated by one physician and the intra-uterine gestation handled by a different physician. In some cases there is spontaneous or incomplete abortion with no concurrent symptoms of extra-uterine pregnancy, and later the extra-uterine pregnancy may precipitate symptoms necessitating a laparotomy or may follow a more benign course of tubal abortion with subsequent absorption of the conceptus, or lithopedion formation.

Eastman[3] extrapolated the incidence of combined gestation to be 1 in 27,500 by multiplying the frequency of double-ovum twin pregnancy (1 in 110) by the frequency of ectopic gestation (1 in 250).

There appears to be no association between combined pregnancy and hydrocephaly and this is the first case reported in which the 2 are recorded together.

Report of Case

P. H., a 26-year-old gravida IV, Para II, abortus I, Negro woman, whose last normal menstrual period was September 23, 1962, was admitted to the Gynecological Service of Freedmen's Hospital on December 27, 1962 with the chief complaint of syncopal attacks for 2 days prior to admission. She also experienced gradually increasing soreness of the abdomen for the 2 weeks preceding.

Physical examination revealed a well-developed and well-nourished woman who appeared to be in moderate distress. The temperature was 98.2°F, the pulse rate 104 per minute, the blood pressure 120/70, and the respiratory rate 22 per minute. The abdomen showed generalized distention and tenderness with the latter more marked in the lower quadrants. Pelvic examination revealed the uterus to be the top limit of normal size and the cervix to be soft and not dilated. There was generalized tenderness and bulging in both adnexa. The hematocrit was 13 per cent. The patient was thought to have a ruptured tubal pregnancy and was prepared for surgery.

Laparotomy disclosed a ruptured right tubal pregnancy, with 2,000 c.c. of blood in the abdominal cavity. A right salpingo-oöphorectomy was performed. The patient was given a total of 2,500 c.c. of whole blood intravenously. She remained afebrile from her second postoperative day and was discharged on the seventh postoperative day.

On sectioning of the ovary 2 large corpora lutea were discovered. The remainder of the surgical specimen was compatible with the operative diagnosis. The patient was next seen 5 weeks after her discharge and was found to have a uterus commensurate with a 20-week gestation. She was followed in the Prenatal Clinic and had an uncomplicated course with the exception of a trace to 1 plus pedal edema on 3 different occasions.

On June 29, 1963 the patient's bag of water ruptured and she was admitted to the Maternity Ward, not in labor. She commenced to have mild pains on the following day, but they were not of sufficient intensity to cause any undue discomfort. The fetal heart tones were of good quality. Vaginal examination showed the presenting part to be the fetal head. It was noted that the sutures were widely separated, and the diagnosis of hydrocephaly was entertained. Roentgenograms of the abdomen and pelvis confirmed the diagnosis of a hydrocephalic fetus.

A 17-gauge spinal needle was introduced into the fetal brain through a cervix dilated to 5 cm., and 300 c.c. of cerebrospinal fluid was aspirated.

The patient was stimulated with 1 ampule of sparteine sulfate (Tocosamine*). Good labor ensued, and the patient was delivered in 3 hours of an 8 lb., 8 oz. female, stillborn, hydrocephalic fetus by mid forceps rotation and episiotomy.

The postpartum course was uneventful and the patient was discharged on the third day.

It seems apparent from the presence of 2 large corpora lutea in the extirpated ovary that both ova of this combined pregnancy came from the same ovary. Had proper cognizance been made of this fact diagnosis of the intra-uterine pregnancy could have been made before the patient's discharge following surgery for the ectopic gestation.

Criticism may be leveled at the use of sparteine sulfate to stimulate labor in the known presence of cephalopelvic disproportion. Decompression of the fetal head had collapsed the presenting part sufficiently to allow it to engage, and it was thought that vaginal delivery would take place safely if uterine contractions could be initiated.

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* A product of Trent Pharmaceuticals, Inc., New York, N. Y.

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Todd's Paralysis—Baird

(*Continued from page 465*)

roneously reported as examples of this symptom-complex. A definition for the "ideal case" of Todd's paralysis has been presented. The significance of the occurrence of this entity has been discussed. A case has been presented to illustrate the prognostic difficulties which confront the physician managing a patient who develops transient postepileptic paralysis associated with the first convulsive seizure.

Acknowledgment: The case report of L. T. was included through the courtesy of Dr. Roland B. Scott, who also gave helpful suggestions regarding the preparation of the manuscript. Dr. Richmond S. Paine provided the neurologic evaluation of the patient described in this report.

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PRESIDENT'S PAGE

IS THIS THE END?

It must have been pondered by some thinking people that Homo sapiens, the latest of a procession of species over the eons to multiply and dominate this planet, may, like his predecessors, the dinosaurs for instance, one day become extinct for one cause or another.

As man becomes more numerous by almost geometric progression, there are dark predictions that the world food supply will be outpaced. It is foretold that we shall be reduced to subsisting on sea weeds and algae. There is, however, a more immediate and noisome peril.

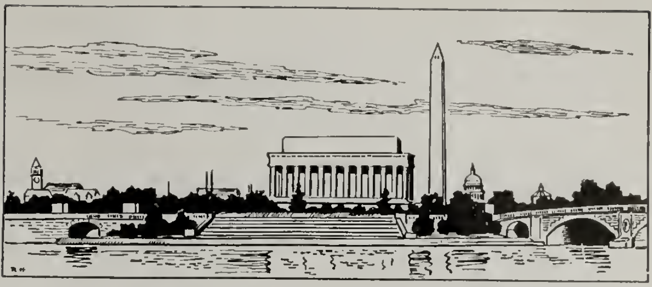
This is to suggest that the human race may drown or suffocate in its own waste products. Reference is not to the stench of raw sewage so frequently encountered in the far Orient nor to the need for the African pygmy to periodically move his village site because the accumulation of unremoved offal and dejecta becomes too much even for him. We need look no farther than the air over our fair cities, the rivers flowing through our countryside, and the bays and harbors of our coasts.

One of the most depressing sights is that which greets the modern air traveler as his plane loses altitude while approaching airports almost anywhere in the Western World. From the icy blue of even a few thousand feet up one descends into a murk of factory fumes ranging from lurid grey to nauseating yellows and greens even in cloudless weather. We have become so inured to this that as we deplane and look upward from the ground we forget we are crawling about at the bottom of an air-sea of garbage in the sky. Who has not been sickened by the exhaust of passenger buses which is perceptible for blocks behind these modern conveyances? What is this doing to our vitality and enjoyment of life?

The industrial plants not only pollute the air we breathe, they dump all manner of end-products of their processes for which they can find no use into the nearest river. Many of these chemicals cannot be removed by currently available "water purification" methods. Have you sampled Philadelphia, Pa. water? Whereas industry almost insensately strews its mess about, many builders and developers of individual homesites cynically neglect the most primitive measures for sewage disposal unless they are sharply supervised. Both industrial and individual callousness in this matter leaves our streams, rivers and coastal waters in a condition approximating that of sewers. Almost all species of underwater life are killed or vitiated, and one bathes in such waters at considerable risk of serious disease.

As presumably thinking people and scientists we are called upon to use all available means and opportunities to focus attention on this steadily increasing poisoning of our existence and to foster corrective action.

R C Corley



EDITORIALS

Reorganization of D. C. Health Department

The twentieth century is an exciting time to write about anything—space travel, world politics, chemotherapy, geriatrics or healthy babies.

My own special interest is public health, where news is continuous, abundant, changing and progressive. In public health, as in the practice of medicine, engineering, and scientific technology, it is important to know where one has been in order to make plans for tomorrow. As the family physician makes a thorough examination before he prescribes treatment, the public health administrator surveys the health agency before making recommendations.

A series of studies have been conducted in the District Department of Public Health since my appointment last September (1962). Several members of my staff were assigned to review and study the activities of the Department. In addition, valuable assistance was provided by representatives of the U. S. Public Health Service and the U. S. Children's Bureau.

Based upon my own observations and analyses and the findings, judgments and opinions of the study groups, I submitted my report to the District Commissioners. In this report I pointed out that many of the Department's employees are dedicated and conscientious and that several of our programs are excellent. However, several problems also were cited, along with ways in which these might be resolved.

The report recommended steps to be taken for a realistic start in developing a smooth and efficient organization and one in which all programs would receive proper direction and coördination. In order for this to be achieved it was requested that all of the programs of the Department be divided into 5 major areas:

1. Preventive Services
2. Mental Health and Retardation
3. Medical Care and Hospital Services
4. Environmental Health
5. Administration

Each of these programs would be headed by an Associate Director who would have the responsibility to direct and coördinate each of these program areas and to whom I could look for advice and recommendations as needed. This is an entirely different approach from the current organization under which each activity of the Department is almost independent.

The 2 major objectives of this new organization are:

(a) to knit the Department into a single cohesive unit rather than have each program go off in its own direction;

(b) to insure a business-like and efficient operation.

One other recommendation might bear mentioning; this is in connection with advisory councils. Here I have proposed the establishment of one strong advisory council which would have several committees, each composed of representatives of the various knowledgeable organizations and agencies, who would be in a position to provide valuable advice and guidance. Of course, the D.C. Medical Society will be well represented, both on the new Public Health Advisory Council and in its committees. In this way the Medical Society will be able to play a key role in helping to plan, develop, or modify many of the District's public health programs.

Murray Grant, M.D., D.P.H.
Director of Public Health for the District of Columbia

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

Practical Considerations in the Management of Urinary Calculus Formation

In view of the fact that there have been some recent contributions in the field of urinary calculus research which have some practical value, it would seem appropriate to make available several aspects of the management of patients who make urinary calculi.

The Conference on Renal Calculus Disease, which was held in Washington, D.C. in the auditorium of the Medical Society of the District of Columbia and at the Mayflower Hotel on November 29, 30 and December 1, 1962, proved to be the most comprehensive conference of its kind ever held in this country. Participants were individuals active in all of the various fundamental scientific disciplines. Much of the data presented was so highly technical that there would be no reason to present it for general consumption. There were 2 contributions, however, which seemed to carry observations of practical value when applied to our management of patients who form calculi.

One of the contributors was Dr. William C. Thomas, an Associate Professor of Medicine at the University of Florida School of Medicine in Gainesville. He had been associated with Dr. John Eager Howard, Professor of Medicine at Johns Hopkins University Medical School, and collaborated with him in his observations relating to the problem of urinary calculus formation. They observed that, when the urine from patients who form stones was incubated with rachitic rat bones, mineralization of the cartilage matrix would occur. When the urines from patients who are not stone-formers were incubated with this material no mineralization occurred. They also found that if they administered phosphorus to the patients who were stone-formers their urines would then fail to produce mineralization.

Thomas made another rather interesting observation. At the time of arrival and 6 months later he tested the urines from personnel in the University who had come from so-called nonstone-forming areas and found a rather unusual phenomenon. A moderate number of these individuals' urines which did not originally produce mineralization did so after a period of 6 months in the Gainesville area. The influence of phosphate on patients' urines has been utilized therapeutically by Dr. Howard, Dr. Thomas, and some other physicians.

The following formula is administered to stone-formers: sodium phosphate dibasic 5.35 Gm., sodium phosphate monobasic 2.65 Gm., potassium phosphate dibasic 5.35 Gm., and potassium phosphate monobasic 2.65 Gm. plus distilled water sufficient to make 240 c.c. This solution is administered in 2-teaspoonful doses 3 times a day.

Although it is a little too early to be positive in statements concerning the influence of this prescription, practically all who have used it are encouraged.

There is another therapeutic use for this prescription, i.e., the control of encrustation in patients who have indwelling catheters or transport tubing of any kind.

There was another paper which reëmphasized the early recommendations of Fuller Albright to the effect that infection is one of the most important factors in the formation of urinary calculi. He used to keep very close track of his patients at his Calculus Clinic which he held every week. The contribution by Dr. J. Stanton King, Jr. from the Department of Biochemistry at the Bowman Gray School of Medicine, Winston-Salem, N.C. supports Albright's policy. He prepared artificial solutions simulating urine and put different types of matrix material in these solutions to see whether crystallization would occur. Without rather complicated technical, detailed description of his observations he proved that when bacteria were absent no crystallization occurred and that when various types of bacteria were present there was pronounced crystallization. All this adds up to a reëmphasis of the conclusion that in our attempts to prevent calculus formation in patients who are prone to form calculi we keep their urinary tracts free of infection.

It is of interest to recall that Colonel Kimbrough in attempting to clear urinary-tract infections in the calculus-producing patients at Walter Reed Hospital was successful in controlling the infections only in about 20 per cent of his patients.

In conclusion, 2 observations in the clinical management of patients who happen to be urinary calculus-formers have been presented in the hope that they may prove to be of some value in preventing recurrent stone-formation in some patients in the future.

William P. Herbst, Jr., M.D.
Professor of Clinical Urology, Georgetown University School of Medicine

Why Not More Women in Medicine?

The spectacular flight through space of Valentina, the Russian woman astronaut, led to some critical comments on the freedom of opportunity for American women in all fields of work as compared with other countries. This criticism pointed out that women doctors constitute 85 per cent of the medical profession in Russia, 24 per cent in Great Britain, 12 per cent in Canada, and only 5 per cent in the United States. Isolated facts such as these can be misleading. They might seem to indicate that American women either find it more difficult to enter the profession because of lack of opportunity or aptitude or that a smaller percentage of women pursue a work career other than marriage and family. The scarcity of American women in medicine needs to be examined as an integral part of the problem of shortage of physicians in relation to the population boom in the years ahead.

Woman has achieved a recognized and unquestioned place in the medical profession of the United States. Today all medical schools in the country admit women, and they are represented in all the specialties. Yet in the past 30 years there has been no significant increase in the actual number of women doctors or of their percentage of the total profession. In the year 1929–30 only 481 women applied for admission to medical schools. The 315, or 65 per cent, who were accepted constituted 4.5 per cent of the total admissions. These are representative of the figures which prevailed until the post-War years when the number of applicants was about doubled. Since then the number has remained below the peak of 1,231 attained in 1950. In 1961 there were 1,166 applicants, of which 736, or 63 per cent, were accepted, to constitute 5 per cent of the medical school admissions. The percentage of women applicants accepted has compared favorably with that of the men with the exception of a few post-War years. The actual number of male applicants has remained relatively stable. In 1929–30, of the 13,174 applicants, 6,720, or 51 per cent, were accepted. In 1961 there were 13,215 applicants, with the acceptance increased to 7,946, or 61 per cent. From these data it would seem that women have been slow in availing themselves of the opportunity of entering the medical profession. Why?

The scarcity of women doctors cannot be attributed to lack of opportunity or ability. The American Association of Medical Colleges has released data which demonstrate that deficiency of preliminary training or lack of aptitude does not supply the answer. Women have earned a relatively constant 35 per cent of all B.A. degrees in the past decade. The total number increased from 104,037 in 1952–53 to 145,884 in 1960–61. Yet the number of women to receive the M.D. degree has remained unchanged—363 and 354, respectively, for the 2 years cited.

Are women kept from the medical services for one or a combination of the following reasons? (1) A personal attitude arrived at largely through lack of understanding of the opportunity and need of women in the field. (2) A social expectancy whereby medicine is still in the category of "man's work." (3) The traditional system of education, which through the centuries has been geared to meet the needs of the male, women find difficult to adapt to her own personal and social life. (4) The seeming conflict between professional service and marriage and family.

It has been common belief that whereas men choose and pursue a work career for life, young women seek temporary employment and drop out of work after marriage or when they start their family. Only those women who do not marry pursue an uninterrupted work career. The truth is that the choice between work and marriage and family is now far from the usual thing. Rather a large percentage of women are combining the 2 careers.

In 1960, 65 per cent of all women were married by age 21 and all but 7 per cent by the early thirties. (In 1940, 15 per cent of women in their thirties had not married.) A goodly number do not stop school with marriage—12 per cent of women in college were married. Nor do they invariably stop work with marriage and advent of family as they tended to do in the past.

In 1890 less than 1 married woman in 20 was gainfully employed. In 1950 the ratio was 1 in 5, and by 1960 the ratio reached 1 in 3. Also, in 1960 one-third of all women were working and constituted one-third of the labor force of the country. Why the ratio has been changed so markedly in 20 years is to be found by examining the number of women employed in the different age-groups in the last 3 decades. About 45 per cent of all women aged 25 to 30 were working in each of the years 1940, 1950 and 1960. There was a corresponding drop for each of these years to 35 per cent employed in the ages 25 to 30. After this slump, which corresponds with the early years of marriage, there is a decisive change with the years in the number employed. In 1940 there was a steady decline in the number of women over 30 working to less than 15 per cent by the age of 60. In 1950 there was a slight increase in the number over 30 working but never to equal the 20–25 age group. In 1961 there was a steady increase with each age group after the low of 25–30. There were more around the age of 50 working than those of 20–25, and 30 per cent were still working between the ages 60 and 64.

Most women who are married have children but not the large families so prevalent a century ago. The majority have their last child by age 28, and by 34 the youngest child is in school. And here we find women in large numbers going back to work. Forty-two per cent of women who have children between the ages of 6 and 18 are working. Some go back to work or to a profession for which they have interest and training. But far too many take a job to relieve boredom or to ease the family money problem.

It is not a question of whether women continue to work. The number working will undoubtedly increase in coming years. Rather it is what will be their choices of work that will bring the most satisfaction to each as individuals as well as a more important contribution to society. Women constitute a cross-section of the population. They have a wide and varied range of aptitudes and capabilities. Large numbers each year are receiving advanced education which could be preliminary to professional training. More girls graduate from high school than boys, and women constitute 36 per cent of college graduates. But not a proportionate number are utilizing the maximum of either capabilities or training. The proportionate number of women going into medicine is probably representative of all the professional and executive careers. Too many capable women are stranded in the vast pool of the unskilled or semi-skilled who could and should be employed in occupations more commensurate with their potentialities. This is a vast waste of capabilities at a time when the need for the professionally trained is great.

Women will continue to choose marriage and family and put it first. But since a large majority are going to continue to work, young women should be encouraged to recognize their own capabilities, realize the varied opportunities, obtain training, and apply it purposefully as a lifetime career. To make this possible—and this is especially true for medicine—provision must be made for them to continue their work in a less rigid routine when their children are small so that they will not have to drop out and then return 5 or 10 years behind their contemporaries and too often to inconsequential jobs in their chosen profession.

Elizabeth Parker, M.D.

The Neurosurgeon*

Philadelphia has the oldest medical school in America. It has always been a celebrated medical center, but most especially it nourished some of the most prominent pioneers of neurology and neurosurgery. It was there that the first brain tumor was successfully removed; that the first drainage of the ventricles was performed; that the successful operation of posterior rhizotomy for trigeminal neuralgia was conceived and executed. Likewise, it was there that cordotomy was developed. It was also in Philadelphia that the pioneers learned that the techniques of general surgery were inadequate and that the neurosurgeon must employ special techniques; that he had to develop a knowledge of neurology, neuroanatomy, and neuropathology. At first the neurologist told the surgeon where to make the incision and what neural structures to attack, but this proved awkward and impractical. In some instances the neurologist attempted to handle the scalpel and in other instances the surgeon attempted to learn neurology. These pioneers of Philadelphia constituted a huge component of all the physicians who were attempting to treat some of the ills of the central and peripheral nervous systems by surgical therapy.

The neurosurgeon now has at his command more knowledge than did his predecessor. The neurosurgeon of the future will have even more knowledge. The accumulation of knowledge is mortal and will change with each generation.

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* Excerpts from an address by Dr. O. Hugh Fulcher, retiring President of the Philadelphia Neurosurgical Society, delivered in Washington, D. C., March 29, 1963; reprinted by permission from Philadelphia Med., 1963, 59, 756.

These pioneers in neurosurgery have left a legacy that is immortal. This legacy is personal discipline. A dedication to a profession or to an ideal is noble, but it is ineffective without its pursuit by courage and by discipline.

The teaching of the art and science of neurosurgery is now secure. The neurosurgeon is the only surgeon who operates in all cavities and in all parts of the body and extremities, from the scalp to the soles of the feet. Wherever there are nerves, that is his field of therapy; hence the neurosurgeon now is the only "general surgeon." I predict that future basic training of all specialists will be in neurosurgery and not in general surgery. The student of neurosurgery becomes familiar with the viscera and blood vessels and he is also taught to recognize and to understand the function of, and to respect neurogenic tissues. Thus, he is compelled to develop a technique so gentle that these delicate tissues would tolerate his methods. This gentleness and discipline, if acquired by surgeons of all specialties, will promote superiority.

The discipline of the neurosurgeon in his own field is adequate, but it is yet to be demonstrated that he has acquired wisdom to conduct himself properly in the turmoil of sociologic and political advances. The neurosurgeon, dedicated as he is to his profession and noble ideals, but without sufficient knowledge of community problems, may find himself easily captured and used by the politician. He may not be sufficiently versed in all the nice techniques of self-defense. He may indeed be impressed by glittering promises. Therefore, let me express what I have interpreted as the motto of the Philadelphia Neurosurgical Society†: "We choose the right to be uncommon men if we can. We seek opportunity, not security. We do not wish to be kept citizens, humbled by having the state look after us. We desire to take calculated risks, to dream, and to build, to fail, and to succeed. We prefer the challenge of life to a guaranteed existence; we wish to maintain our freedom; we wish not to trade our dignity for a handout. In spite of all pressure, we have a heritage to stand erect, proud, and unafraid; to think and to act for ourselves. We wish to enjoy the benefits of our heritage, to accept the responsibilities of our specialty and to constitute a foundation for a better tomorrow."[1]

Draft Call Information

SEVERAL STATE CHAIRMEN have wondered and asked questions about the present method of making a call. This last call (no. 33) and those which preceded it and will follow it were made on the following basis:

After a special call for physicians is received by the Director of Selective Service from the Secretary of Defense, the call is allocated by National Headquarters of Selective Service to the various states.

The distribution of the call to a state is determined by its percentage of the total number of physicians who have been classified as available for induction in the necessary number of age groups involved to meet the call. That is to say, if 10 per cent of physicians in the age groups estimated to be needed to meet the call are to be found in your state then 10 per cent of the call will be made against your state; i.e., if there are 1,000 in I-A (examined and acceptable) in the liable age group for that call in your state, they will be asked to supply 100 to meet the call.

ROY J. HEFFERNAN, M.D.
Chairman, National Advisory Committee to the Selective Service System.

Results of Analysis of "Krebiozen"

THE FOOD AND DRUG ADMINISTRATION has identified the "Krebiozen" powder given to its inspector by Dr. Stevan Durovic and Dr. Andrew C. Ivy on July 12, 1963, as creatine. Creatine is an amino acid derivative plentifully available from meat in the ordinary diet and is a normal constituent of the human body. It is readily available as an inexpensive laboratory chemical.

Creatine is in muscle tissue, and in blood in lesser amounts. The human body will produce in 24 hours as much as 100,000 times the amount of creatine as the alleged content of "Krebiozen" in 1 ampule. The chemical was tested some time ago against animal tumors in the routine cancer chemotherapy screening program of the National Cancer Institute. It was found to be ineffective even in very high doses.

Laboratory studies are continuing to determine how much, if any, of this substance can be dissolved in mineral oil and how much, if any, is in the ampules of "Krebiozen" which FDA has obtained.

FDA is continuing its investigations of all of the facts regarding "Krebiozen."

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† Founded in Philadelphia in 1958.

[1] See "An American's Creed," Philadelphia Med., 1962, 58 (September 21).

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A Month in Algeria Under the Care-Medico Program

CATHARINE G. KNOP, M.D.

Pediatrician, Yater Clinic, Washington

Like many other American physicians, I recently volunteered for the CARE-MEDICO program overseas. The team of which I was a member went to Algeria, where MEDICO has been conducting an emergency program since the fall of 1962. Only 200 physicians were left in Algeria at that time, since nearly a thousand French doctors had left the country, which, after 7 years of suffering and destruction, had gained its independence.

Physicians from East and West had responded to Algeria's medical dilemma, and hospitals throughout the country were staffed by foreign medical volunteers.

The first American team had chosen the Hôpital Civil de Beni-Messous because of its position outside Algiers in the open country by the Mediterranean. The modern 6-story building, structurally intact, was located outside the area of still brewing unrest. Built as a tuberculosis sanatorium, it housed, besides patients in advanced stages of TB, the evacuées of the bombed, large university hospital, Mustapha. These patients (1,200) were left without physicians, and the staff of 124 technicians had dwindled to 3. The almost nonexistent personnel was not the only problem of the hospital. The equipment, such as sterilizers, elevators, oxygen apparatus and telephones, was broken down. Repair was virtually impossible, since trained repairmen had left the country along with physicians and other professional people.

By the time our team arrived in June 1963 the basic technical facilities were functioning. A part of the large sanatorium had been turned into a general hospital, staffed by American specialists and nurses and aided by Algerian untrained help.

We arrived by air—8 physicians, 1 doctor's wife, and my husband. Having left New York on a humid day we were pleasantly surprised upon getting to Africa to be greeted by a cool, fresh, sunny spring day, and to our delight this weather prevailed until our departure. We had 24 hours in which services were transferred from the preceding team to ours. And then I was alone with 80 patients in the Pediatrics Department and with 25 to 30 children in the Clinic every morning.

Since our quarters were at the Djemila Palace, a hotel with Arab charm and flavor, in the center of town, an early start was necessary. We had breakfast at 6:45 a.m. under palm trees in the garden; our car left at 7:15 to get us to the hospital by 8 a.m. At that hour the Clinic halls already were filled with patients who had come from far and wide and often had traveled several days to consult the *Docteur American de Beni-Messous.*

Dr. Knop conducting a children's clinic at Beni-Messous Hospital. The young man functions as medical aide and interpreter.

I improvised a system of divided labor whereby Mrs. Brawner, wife of our ophthalmologist, volunteered as recording secretary. Norida, an intelligent young Algerian woman, obtained from the patients medical histories and complaints, leaving my capable and patient interpreter, Mohamed, to give medical assistance and to translate English prescriptions into French, Arab or Kabyle.

I left the U.S.A. wondering whether I was equipped to treat diseases in a country unknown to me. I soon found out that I saw little that I had not treated in my own office, but the severity and frequency differed. Active TB was seen in 2 to 3 patients per day with little chance of follow-up. Patients with malnutrition in all degrees of severity were treated daily. Ophthalmologic problems were common even among the children. Patients with pertussis could be found sitting in a tightly squeezed row next to a newborn infant with diarrhea.

The Hadj, head of a nomadic tribe in the Sahara Desert whose members were examined by Dr. Knop.

A very special impact was made by Dr. Luther Brawner, of Richmond, Va., our ophthalmologist, who did the first corneal transplant on a 40-year-old man from the desert. Headlines in a number of papers flashed the news throughout the country. An American Air Force plane, the first ever to land on Algerian soil, flew for the sole purpose of delivering 2 American corneas. The plane was met by car, and within an hour American corneas and an Algerian patient were brought together in the operating suite in Beni-Messous.

The number of outpatients was unlimited, and the Clinic closed only when all patients were seen. Lunch was served in the big communal dining room where the food was plentiful if not always appetizing. Good domestic wine served with meals made up for meal deficiencies.

With only a few hours left between late lunch and departure of the commuter car, the accent in the hospital was on most essential work. There were no residents, no interns or students, and too few although hard-working American nurses. From admission examinations, I.V. injections, and writing of orders to signing out patients—all fell under the responsibility of the pediatrician. In spite of my passable French, needed in communicating with Algerian personnel, the language barrier between myself and the Arab-speaking children became a time-consuming and regrettable handicap in human relations as well as in good medical treatment.

The deficiency of our services seemed negligible, however, when one adds up the lives saved and health improved by the combined surgical, orthopedic, ophthalmologic and medical teams.

Since our working days were 6 per week and each member of the team covered in turn all services of our hospital on Saturday night and Sunday, some limited time was left for exploration of medical facilities in other parts of the city and country.

We visited Tixeraine, a rehabilitation center for male adult amputees, who were treated by a German volunteer orthopedic surgeon. Cordial relations were established with physicians from various hospitals, and there was a give and take as need arose. A Yugoslavian plastic surgeon who volunteered at Douera Hospital operated at Beni-Messous on one of our children with a complicated pedicle graft. Our chest surgeon served at Mustapha during the temporary absence of its surgeon. I made rounds with Professor Dr. Venezia, a capable and cordial man, head of the restored Pediatrics Department of Mustapha Hospital. Dr. Buhr, head of the children's tuberculosis hospital, took time to show me the various sections of his very efficiently run sanatorium. I do not recall ever having seen anywhere else so many long rows of children of various ages and in various stages of TB under one roof.

Dr. Knop examines and treats patients in the village of the Hadj.

My husband, who had explored Algeria's economic, social and political situation, helped me to piece together the general background of my patients. We planned a trip to a small town near Constantine, where a German physician with his nurse-wife was singlehandedly caring for the 20,000 inhabitants. We went by train through beautiful and fertile farming country, bordered by scenic mountain chains. In Constantine we met an European relief worker who explained to us the operations of experimental farms run by American Quakers.

Finally, the most rewarding experience of our trip was a medical survey of a nomadic village in the Sahara Desert arranged by the Catholic relief services during a weekend. The village had been bombed by the French troops, and the inhabitants had returned to the way of life of their forebears. Old desert hands looked at us with disbelief when we recounted our story. No stranger ever enters the tent of a nomad, but an exception was made for us, and it was therefore our privilege and good fortune to sit with them cross-legged on their lovely carpets while our patients knelt before us, accepting the treatment we could give them. Arthritis, blindness and stomach ailments were the most common complaints, but with the limited facilities at our disposal we directed our help generally to acute infections. The drive home on a moonlit night over the lonely desert, past sheep and camel herds, will remain an unforgettable experience.

As I am writing today, successive teams from the U.S.A. and elsewhere are aiding the sick, but the basic problem of Algeria will remain unsolved until training facilities there are established and a new generation of native doctors takes over.

New Benefits for the Senior Citizen

A HEALTH PROTECTION PROGRAM designed especially for senior citizens was announced jointly, September 26, 1963, by F. P. Rawlings, Jr., President of Group Hospitalization, Inc., and Dr. Henry L. Darner, President of Medical Service of D.C. A summary of the benefits provided under the new Senior Citizen Program follows.

1. *Hospital Care.* For most conditions, up to 90 days for each in-hospital confinement with "covered-in-full" service benefits in 23 Washington Area Blue Cross hospitals and in approximately 6,000 other Blue Cross hospitals throughout the United States.

2. *Nursing Home Care.* Two days of nursing-home care will be provided for each unused hospital benefit day. Allowances for Class A Nursing Homes (approved homes with which Group Hospitalization, Inc. has a written agreement) are 90 per cent of the first $10 of daily charges plus 50 per cent of the next $10. Maximum benefit will be $14 a day. For Class B Nursing Homes (all other homes approved by Group Hospitalization, Inc.) allowances will be 75 per cent of daily charges, with a maximum benefit of $8 a day.

3. *Visiting Nurse Service.* Four days of visiting nurse service will be provided for each unused hospital benefit day.

4. *Surgical Care (in and out of the hospital).* Allowances for surgery range from $3 to $300 for a single procedure performed.

5. *Administration of Anesthesia.* Allowances range from $9 to $59, depending upon the procedure performed.

6. *In-hospital Physicians' Visits.* One visit a day for a maximum of 90 visits for the medical treatment of a disease or ailment.

7. *In-nursing Home Physicians' Visits.* One visit a week for a maximum of 13 consecutive weeks for the continued medical treatment of a condition for which the patient was hospitalized.

It should be noted that the allowances provided by the SCP for benefits numbered 4 through 7 will be accepted by Participating Physicians as full payment if the subscriber's income is within stipulated amounts—$2,500 a year for an individual, and $4,000 a year for a family. Of course, the fee schedule allowances are paid toward physicians' charges regardless of the subscriber's income.

8. *Radiation Therapy.* Benefits will be provided, in or out of the hospital, for X-ray, radium and radon for treatment of malignant diseases. Radioisotopes will be provided for specified conditions.

9. *Diagnostic X-ray Service.* Benefits will be provided for in-hospital X-ray examinations for a registered bed patient when the examination is related to the condition for which the patient is hospitalized. X-ray examinations performed in or out of a hospital within 72 hours of an accident will also be allowed.

10. *Laboratory and Pathological Service.* Benefits will be provided for clinical laboratory examinations rendered in a hospital when such services

are directly related to a condition for which the patient is hospitalized.

It should be noted also that the allowances provided by the SCP for benefits numbered 8 through 10 will be accepted by Participating Physicians as payment in full regardless of the subscriber's income.

11. *Preëxisting Conditions.* Covered after a 6-month waiting period.

The subscription charges for the new Senior Citizen Program reflect the known higher cost of medical care for the aged due to the greater utilization of available medical benefits and to longer periods of necessary medical care and treatment. For the Individual Contract (unmarried persons) the cost is $17 a month, and $34 a month for the Family Contract (husband and wife, or husband, wife and children). Charges are payable monthly or quarterly.

The Senior Citizen Program was opened for enrollment for a 2-week period, October 1–15, to residents of the Washington, D.C. area who were or would be 65 years of age on or before November 1, 1963.

In making their joint announcement Mr. Rawlings and Dr. Darner explained that the new SCP does not represent the first coverage of persons 65 or over by the D.C. Blue Cross and Blue Shield Plans. There are now approximately 28,000 Washington area citizens over 65 enrolled in Group Hospitalization and Medical Service regular benefits programs.

Cigarette-Lung Cancer Relationships

The Illinois Division of the American Cancer Society wrote to all the State Medical Societies regarding resolutions and/or other actions concerning the relationship between cigarettes and lung cancer. A summary of the replies indicate:

1. Thirteen Medical Societies have passed resolutions concerning smoking, including the Medical Society of the District of Columbia.

2. No action was reported taken or contemplated in 25. Some 9 other states were studying the matter or they were not accepting cigarette advertisements in their journals, etc.

The Illinois Division reported that they received 46 replies, but no response from 9.

Study of Hodgkin's Disease

The coöperation of physicians is requested in a study of Hodgkin's disease being conducted by the National Cancer Institute's Medicine Branch at the Clinical Center in Bethesda, Md.

Particularly desired are patients who have had no previous treatment, or minimal prior treatment, for their Hodgkin's disease. All clinical stages of biopsy-proven disease are acceptable. The major purpose of the study is to determine the therapeutic effect of combination chemotherapy and X-irradiation.

Physicians who wish to have their patients considered for the study should phone or write to Dr. Vincent DeVita or Dr. Emil Frei III, Medicine Branch, National Cancer Institute, National Institutes of Health, Bethesda, Md. 20014; telephone 49-64251.

Letters to the Editor

Civil Rights March*

I should like to take this opportunity to express my sincere appreciation, in behalf of this Department, for the fine way in which you provided such invaluable assistance in connection with the planning, development and execution of the medical and public health services relative to the Civil Rights March.

It is testimony to the fine relationship that was developed between the Medical Society and this department as well as with many other agencies within the District of Columbia that the operation proceeded as smoothly as it did. As you know, many hours of hard work were put into this program by members of your staff as well as of ours.

While the final figures have still not been completely tabulated, it may be of interest to you that it appears that 2,164 patients were seen at our first-aid stations and 86 transported to hospitals. Only 8 were actually admitted to hospitals. I need hardly say that the emergency water supplies and comfort stations were used extensively.

I feel proud, from the observations I made of the program, of the manner in which it was carried out. I have difficulty in believing that it would have been possible to have had a much smoother operation and I feel that this reflects very highly upon the quality and quantity of services that you helped to provide.

With kindest regards, I am,

Very sincerely,
Murray Grant, M.D., D.P.H.
Director of Public Health,
District of Columbia

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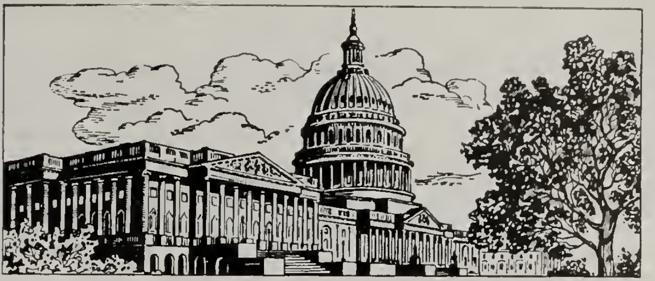
* The key individuals in arranging the Society's part in this project were Drs. John W. Latimer, Jr., William R. Strong and James E. Chapman.



NEWS & PERSONALS

Boards & Committees

The regular meeting of the **Executive Board of the Medical Society of the District of Columbia** was held, September 23, 1963 in the Medical Society's building at 7:30 p.m. Dr. W. LeRoy Dunn, Chairman, presided. Present were Drs. Karl C. Corley, Edward W. Nicklas, J. Rogers Young, Victor R. Alfaro, Duane C. Richtmeyer, J. Spencer Dryden, Raymond T. Holden, and Mr. George W. Cooley, Secretary. Also present was Dr. C. Willard Camalier, Jr.

Committee Meetings

The Secretary reported the following Committee meetings held since the Board last met:

August	15	Medical Bureau Committee
	20	Grievance Committee
	20	Committee on Public Health
	20	Emergency Medical Care Committee
	27	Grievance Committee
September	4	Committee on Constitution and By-laws
	6	Review Board for Prepaid Medical Care Benefits
	10	Medical Care Committee
	11	Committee on Constitution and By-laws
	17	Grievance Committee
	18	Committee on Aging
	18	Board of Credentials
	18	House Committee
	18	Committee on Constitution and By-laws

Finance Committee

The Chairman reviewed the proposed budget for 1964, comparing it with the budget for 1963. The 1964 budget was approved as submitted.

The Executive Board also voted: (a) to continue its membership in the Washington Convention and Visitors Bureau, allotting $100 for this purpose; (b) to recommend to the membership that individual contributions be made to the Crime Commission of Metropolitan Washington; and (c) to send a letter to the membership urging support of the United Givers' Fund.

Board of Credentials

The following applicants, as recommended by the Board of Credentials, were approved for membership in the Society:

Active Members

Ridgely Crusoe Bennett, 915 Rhode Island Avenue, N.W.
Laszlo Kalman Csatary, 2121 Pennsylvania Avenue, N.W.
Brian Charles Dalton, Georgetown University Hospital
Margaret Hay Edwards, Diabetes & Arthritis Branch, Division of Chronic Disease-BSS, Public Health Service
Barrett Goldstein, 915 19th Street, N.W.
Luke Francis Grande, D. C. General Hospital
Russell Evans Iler, 5415 Connecticut Avenue, N.W.
Lois F. Lee, Washington Hospital Center
Robert E. McCullough, Holy Cross Hospital, Silver Spring, Md.
Frederick Meyers, 1835 Eye Street, N.W.
Dorothy Erica Millon, 2121 Pennsylvania Avenue, N.W.
Warren James Nelson, George Washington University Hospital
Warren Saul Poland, 5415 Connecticut Avenue, N.W.
Thomas DeWitt Reynolds, St. Elizabeths Hospital
Henry Post Ward, 3000 Connecticut Avenue, N.W.

Associate Members

Merlin LeRoy Brubaker, 806 Connecticut Avenue, N.W.
Robert Charles Nothwanger, 1150 Connecticut Avenue, N.W.
Mariano B. Pimentel, Jr., 102-324 Marcy Avenue, S. E.
Lily Ruckstuhl, 313 Idylwood Road, Falls Church, Va.
Charles Stanley Tidball, 1339 H Street, N.W.
Captain George E. White, MC, USAF, A.P.O. 10, New York, N.Y.
Wai Tuen Wong, D. C. General Hospital

Affiliate Members

Magdolna Anna Iranyi, 3541 West Braddock Road, Alexandria, Va.

Morton Allen Kress, 2121 Pennsylvania Avenue, N.W.
Morrill Cleveland Quinnam, Jr., 2731 Connecticut Avenue, N.W.

Resident-Intern Members

Faruk Said Abuzzahab, 601 North Broadway, Baltimore 5, Md.
Martin Gibbs, 5020 Bradley Boulevard, Chevy Chase 15, Md.

Honorary Membership

Joseph Hamilton McNinch, M.D., Medical Director of the Veterans Administration, was proposed for Honorary membership in the Society with approval of the Board.

Tellers for Nominating Committee Ballots

The following tellers, selected by Dr. Corley, were approved: Dr. Philip Burka, Dr. Frederic D. Chapman and Dr. John F. Gustafson.

Medical Care Committee

The following nominees to the Medical Care Committee, named by Dr. Corley, were approved: Dr. J. Rogers Young and Dr. Frank S. Ashburn.

House Committee

Dr. Alfaro reported on the present status of the work of the House Committee in the selling of 1710–18 M Street and the acquiring of new property. A representative from the Redevelopment Land Authority together with Dr. Herbert P. Ramsey appeared before the Board to discuss properties in the Southwest Redevelopment Area.

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The meeting of September 23 was recessed due to the lateness of the hour and was reconvened on September 30 at 7:30 p.m. Dr. Dunn presided. Present were Drs. Alfaro, Corley, Dryden, Holden, Nicklas, Richtmeyer, Young, and Mr. Cooley, Secretary. Also present were Dr. Camalier and Dr. Grace H. Guin.

Annual Business Meeting and Future Assembly Dates

Since the Washington Hilton Hotel is not accepting conventions for 1964, the Board voted to hold the 1964 Scientific Assembly at the Statler-Hilton on November 16, 17 and 18, and to schedule the 1965 meeting at the Washington Hilton, November 15, 16 and 17. For 1966 it was decided to forego the usual Assembly and to coöperate with the Southern Medical Association, which is holding its meeting in Washington that year, November 14–17.

Site for New Building

Dr. Frederick Y. Donn appeared before the Board to present his views on the selection of a site for the new Society headquarters.

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This meeting was recessed and continued again on October 2, at which time Dr. Dunn presided. Those present were Drs. Alfaro, Corley, Dryden, Nicklas, Richtmeyer, Young and Mr. Cooley, Secretary. Also present was Dr. Camalier. Attorney Warren Magee was present as a guest.

Constitution and By-laws

The Chairman reviewed the revisions recommended by the Committee on Constitution and By-laws. These were discussed in detail and voted on individually. The revisions will be submitted to the membership at the Annual Business Meeting.

Conference on National Defense

Approval was given to allot $100 toward the expenses of Dr. W. Ronald Strong, new Chairman of MEDS, who will represent the Society at the Conference on National Defense in Chicago in November.

Aces and Deuces

It was voted to continue membership in Aces and Deuces, a group made up of those states having 1 or 2 delegates to the AMA, and to remit the $80 for membership dues.

Committee on Public Health

Two recommendations of the Committee on Public Health concerning influenza immunization and a program of vaccination through the Health Department were approved.

Meetings

The 17th Clinical Meeting of the American Medical Association will convene in Portland, Oregon, December 1–4, 1963. *The Journal of the AMA* carries in each issue advance registration forms and a form for making hotel reservations. The Portland Hilton Hotel will be the headquarters hotel, and the Congress and New Heathman Hotels, co-headquarters. The Medical Society's delegates to the AMA, Drs. Raymond T. Holden and C. Willard Camalier, Jr., and the Secretary, Mr. George W. Cooley, are planning to attend the meetings of the House of Delegates.

General News

Dr. Murray Grant, Health Director for the District of Columbia, has employed **10 new administrators** for key positions **in his reorganized Health Department.**

At. D. C. General Hospital Dr. Robert T Kling has been named Chief of Ophthalmology. Dr. David A. Zohn is head of the Physical Medicine and Rehabilitation Department. Two other positions which have been filled at D. C. General are Associate Administrator by Frank Bossong, from New York, and Director of Nursing by Frederick H. Wescoe, of Cincinnati.

In the Central Office of Public Health the following persons have been employed:

Walter S. Callahan, Ph.D., Chief of Bacteriology-Serology Division.

Robert Conn, M.P.H., Chief of the Division of Health Education and Information.

George Fisher, M.S.W., Assistant Program Analyst, Mental Health Study Project.

Todd Frazier, Sc.M., Chief of Program Planning; he was formerly Director of Biostatistics at the Baltimore City Health Department.

Elizabeth R. Smith, Ph.D., Chief Program Analyst, Mental Health Study Project. She was formerly Adjunct Associate Professor of Psychiatric and Mental Health Nursing at Georgetown University School of Nursing.

Ian McLaren, M.D., head of the Tuberculosis Section. He comes from the New York State Health Department.

Dr. Gordon Avery has been appointed to the staff of Children's Hospital, where he will be in charge of the Nursery Unit. He will also be coordinator of the extern program for the training at Children's of medical students from Georgetown University, where Dr. Avery is Assistant Professor of Pediatrics.

Dr. Avery received his medical degree from the University of Pennsylvania in 1958. The next year he received his Ph.D. degree in embryology from the same institution. Since 1958 he has served in the U.S. Navy Medical Corps. Before coming to Children's he was Chief of Pediatrics at the U.S. Naval Hospital in Quantico, Va.

The Bureau of Mental Health of the D. C. Department of Public Health has **added 5 psychiatrists** to its staff. Drs. Leon W. Whitt and Peter G. Angelos will serve in the Adult Mental Health Division. Dr. Whitt is a graduate of Howard University College of Medicine and Dr. Angelos, a graduate of Marquette University School of Medicine.

Dr. George C. Gallagher, in the Alcoholic Rehabilitation Division, received his medical degree from the University of Maryland in 1959.

Drs. Thomas M. Mould and Irwin J. Papish, who are attached to the Legal Psychiatric Services Division, are graduates, respectively, of George Washington University School of Medicine (1959) and Ohio State College of Medicine (1955).

All of these physicians have received psychiatric training at St. Elizabeths Hospital, Washington, except Dr. Whitt, who trained, and later served on its staff, at Crownsville State Hospital, Crownsville, Md.

"Guides to the Evaluation of Permanent Impairment—The Central Nervous System" is the fifth in a series of Guides developed by the AMA Committee on Medical Rating of Physical Impairment. Others in the series deal with the extremities and back, the visual system, the cardiovascular system, and ear, nose, throat, and related structures. All of the Guides have been designed primarily for use by physicians. The fifth, "—The Central Nervous System," was published in the July 6, 1963 issue of the *Journal of the American Medical Association.* A limited number of copies of the Guides may be obtained without charge from the Committee on Medical Rating of Physical Impairment, 535 North Dearborn Street, Chicago, Ill. 60610.

The Chief of the Division of Foreign Quarantine, Public Health Service, calls attention to leaflets which give **information on the immunizations needed** for the majority of trips to the Caribbean area. They also include recommended health protection hints for travel in the Tropics. The leaflets are entitled "Health Information for Travel in Mexico, Central and South

America and the Caribbean" and "So You're Going Abroad! Health Hints for Travelers."

Copies may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. at 5 cents each or at $3.75 per 100 copies.

The United Kingdom is now routinely requiring a smallpox vaccination certificate for travelers arriving from countries in Africa, Asia and America (except Canada and the United States), as well as from smallpox-infected areas. The United States requires all travelers entering this country to present a validated international certificate of vaccination against smallpox within the past 3 years.

The Public Health Service is offering a revised and expanded edition of the pamphlet, **"The Food You Eat and Heart Disease,"** which describes for laymen the association of diet and the cardiovascular diseases. It is offered as an aid to physicians and nurses in explaining heart disease and its dietary treatment to their patients. Single copies are available without charge from the Public Health Service, Washington 25, D. C. Copies for general distribution may be obtained through the Superintendent of Documents, Government Printing Office, Washington 25, D.C., at 10 cents per copy, $5.00 for 100 copies.

The new officers of the **Louis Mackall Medical Society** are:

Dr. Forrest V. Schumacher, *President*; Dr. Robert Taylor, *Vice President*; Dr. Eugene J. McDonald, *Secretary-Treasurer*.

The next meeting will be held, November 21, at the Kennedy-Warren. Papers will be presented by Drs. William A. Howard and Thomas M. Foley, Jr.

A group of German experts in the field of occupational disease visited the Government Printing Office, October 1, as part of a 5-week stay in the United States for the purpose of examining and studying the problems of occupational diseases and the measures for their prevention and control. Dr. Allen S. Cross, Medical Officer of G.P.O., explained the extensive detection program for glaucoma which is carried on in this large plant and also demonstrated the mouth-to-mouth resuscitation method. The German doctors were also guests of the Chesapeake and Potomac Telephone Company and its Medical Director, Dr. R. Lomax Wells.

Dr. John Parks, Dean of George Washington University School of Medicine, scheduled an all-day scientific session for the doctors, September 30, at the University.

Upon their return to Germany the members of the mission will report on their findings and experiences in this country. The report will be printed by the *Rationalisierungs-Kuratorium der Deutschen Wirtschaft* and will be made available to all interested parties.

Groundbreaking ceremonies for a new **Southeast Community Hospital** for residents of Southeast Washington and nearby Prince Georges County were held, September 29, at Thirteenth Street and Southern Avenue, S.E. The hospital is being built on a 20-acre site, formerly known as Camp Sims, which was turned over to the Southeast Community Hospital Foundation, Inc., by the Department of Health, Education, and Welfare. The estimated cost of building the 305-bed facility is $9 million; completion is scheduled for the fall of 1965.

Dr. William B. Walsh, President of Project HOPE, announced, September 23, that the hospital ship **S.S. Hope will begin its third voyage** on or about November 20, when the ship leaves New York City for a medical mission to Guayaquil, Ecuador.

The Washington Hospital Center dedicated a **new research center,** September 12, which is a memorial to the late George Hyman, Washington contractor. The firm of George Hyman Construction Company erected the $800,000 center at cost.

The 4-story center eventually will centralize all of the research that now is being done in scattered places throughout the Hospital and will house future research programming. The Hospital's extensive eye research program will be accommodated immediately on the first floor.

Personals

Dr. Bruce I. Shnider has been appointed Associate Dean of Georgetown University School of Medicine. He has served as Assistant Dean since 1960 and is Associate Professor of Medicine. An alumnus of Georgetown's Medical School (Class of 1948), he joined its faculty in 1951 as Instructor in Medicine. He has been especially

BRUCE I. SHNIDER, M.D.
Associate Dean of Medicine at Georgetown

active in the teaching program of the Georgetown Medical Division of D. C. General Hospital, where he served as Chief Visiting Physician from 1957 to 1959 and as Executive Officer, 1959–1960.

Dr. Sidney L. Werkman, Associate Director of the Department of Psychiatry at Children's Hospital, has been awarded a fellowship by the Commonwealth Fund of New York to write a monograph on psychiatric education and to visit centers of psychiatry in Europe. He left Washington this month to take up residence for a year in Italy.

Dr. Werkman is a graduate of Cornell University Medical College. He served a residency in psychiatry at Yale University, followed by a residency at St. Elizabeths Hospital in the District of Columbia. From 1956 to 1958 he was a Fellow in Psychiatry at Children's Hospital, and has continued on the staff of the Department of Psychiatry since that time. He is also Assistant Professor of Psychiatry at George Washington University School of Medicine and Lecturer in Psychiatry at Catholic University School of Social Work.

As Senior Psychiatric Consultant to the Peace Corps, Dr. Werkman visited Peace Corps facilities in Nepal and India last winter and more recently in Malaya, Borneo, and Sarawak.

Dr. Ralph M. Caulk was installed as President of the American Roentgen Ray Society at its 64th Annual Meeting in Montreal, Canada, October 8.

Dr. Harry Clark Bates, of Arlington, Va., has been appointed to the Virginia State Board of Medical Examiners by Governor Harrison. He succeeds Dr. John C. Watson, of Alexandria, as Tenth District Representative. Dr. Watson is Past President of the Board. Both Dr. Bates, who is Past President of the Medical Society of Virginia, and Dr. Watson are Associate members of the D. C. Medical Society.

Dr. Charles E. Townsend has been elected to Fellowship in the American College of Obstetricians and Gynecologists.

Obituaries

William Robert Stovall, A.B., M.D.

(1905–1963)

Dr. William R. Stovall, flight surgeon since 1937 and formerly Medical Director of the Civil Aeronautics Administration, died, September 18, 1963 at Sibley Hospital. He lived at 3526 Porter Street, N.W.

Dr. Stovall was born in Hillside, Texas, September 8, 1905 to Thomas B. and Beulah Stovall. He completed his undergraduate studies at Baylor University, and graduated from its Medical School in 1933. He interned at Dallas Methodist Hospital the following year. In 1938 he enrolled for postgraduate study at the School of Aviation Medicine, Randolph Field, Texas.

Dr. Stovall came to Washington in 1938 as Assistant Chief of the Medical Division of the Civil Aeronautics Administration in the Department of Commerce. He was later appointed Chief of the Division and continued in that capacity until 1958, when he resigned to devote his full time to the private practice of aviation and internal medicine.

He served as President of the Aerospace Medical Association in 1952. In 1954 this organization conferred upon him the Theodore C. Lyster Award for "scientific contribution to aviation medicine." He was an honorary member of the Texas Air Medical Association, the Flying Physicians' Association, and the D. C. Chapter of the Civil Aviation Medical Association.

He was an Active member of the Medical Society of the District of Columbia since 1944, a Fellow of the American College of Cardiology, a member of the American Medical Association, and charter member and Past President of the D. C. Chapter of the American Academy of General Practice. He was certified by the American Board of Preventive Medicine.

Surviving him are his wife, Mrs. Thelma Peters Stovall, and 4 children: William R., Jr., Barbara, and John, all of the home address, and Mrs. Ralph T. Mancill, Jr., of Arlington, Va. He also leaves a brother, Curtiss M. Stovall, of Washington, and another brother, Harold D. Stovall, and a sister. Mrs. Thomas K. Moore, Jr., both of Texas.

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Cerebellar Ataxia in Varicella—Chambliss et al

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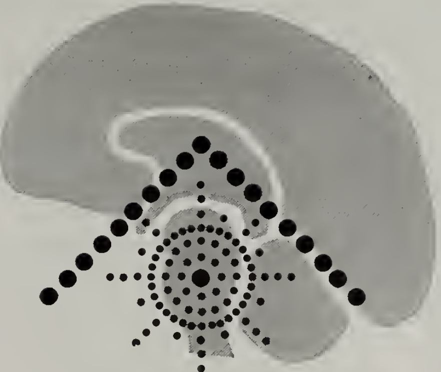

in visceral motor disorders...

EASIER MANAGEMENT

When emotional disturbance is a significant factor in dysfunction of gastrointestinal tone, motility and secretion, Pro-Banthīne with Phenobarbital provides the dual activity that leads to easier management of both the patient and his problem:

Pro-Banthīne (propantheline bromide) to neutralize the effect of excitatory impulses at visceral end organs, *and*

Phenobarbital to moderate emotional incitement centrally.

Pro-Banthīne with Phenobarbital is indicated when a mild to a moderate psychic element is a factor in: Peptic ulcer • Biliary dyskinesia • Pylorospasm • Intestinal hypermotility • Spastic colon • Gastritis • Other dysfunctions of the gastrointestinal tract.

Dosage: One tablet four times a day.

Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action might occur with Pro-Banthīne (brand of propantheline bromide). It is contraindicated in the presence of glaucoma or severe cardiac disease. The usual precautions with regard to phenobarbital should be taken.

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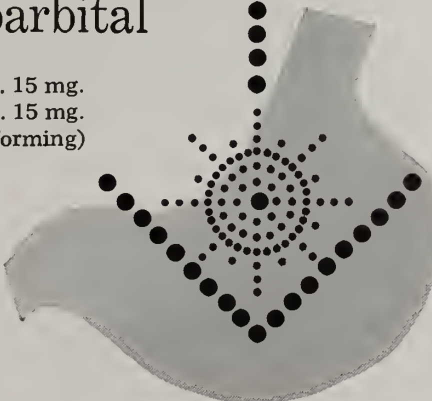
Research in the Service of Medicine

PRO-BANTHĪNE®
with Phenobarbital

Each tablet contains:

propantheline bromide	15 mg.
phenobarbital	15 mg.

(Warning: May be habit forming)



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for the aged and debilitated
Physiotonic benefits
with new oral anabolic
WINSTROL®
brand of
STANOZOLOL

Notable increase in vigor, strength and sense of well-being

WINSTROL (stanozolol-Winthrop), a heterocyclic steroid, combines potent anabolic effects with outstanding tolerance, stimulates appetite and promotes weight gain... restores a positive metabolic balance. It counteracts the catabolic effects of concomitant corticosteroid or ACTH therapy. WINSTROL (stanozolol-Winthrop) rebuilds body tissue while it builds strength, confidence and a sense of well-being in conditions associated with excess protein breakdown, insufficient protein intake and inadequate nitrogen and mineral retention.

Side Effects and Precautions: Prolonged administration can produce mild hirsutism, acne or voice change. In an occasional patient, edema has been observed and in young women the menstrual periods have been milder and shorter. These side effects are reversible, and patients receiving prolonged treatment should be examined and questioned periodically so that, should side effects appear, the
may be reduced or administration of the drug discontinued for
In patients with impaired cardiac and renal function, there is th
sibility of sodium and water retention. Liver function tests may
an increase in bromsulphalein retention, particularly in elde
tients. In such cases, therapy should be discontinued. Althoug
been used in patients with cancer of the prostate, its mild andr
activity is considered by some investigators to be a contraindi

Dosage: Usual adult dose, 1 tablet t.i.d. before or with meals;
women, 1 tablet b.i.d.; children (school age): up to 1 tablet t.i.d
dren (pre-school age): ½ tablet b.i.d. Available as scored tab
2 mg. in bottles of 100. For best results, administer with a high
diet.

WINTHROP LABORATORIES, NEW YORK

Marked improvement in appetite / Measurable weight gain

ESTABLISHED 1873 WOMEN ASSISTANTS

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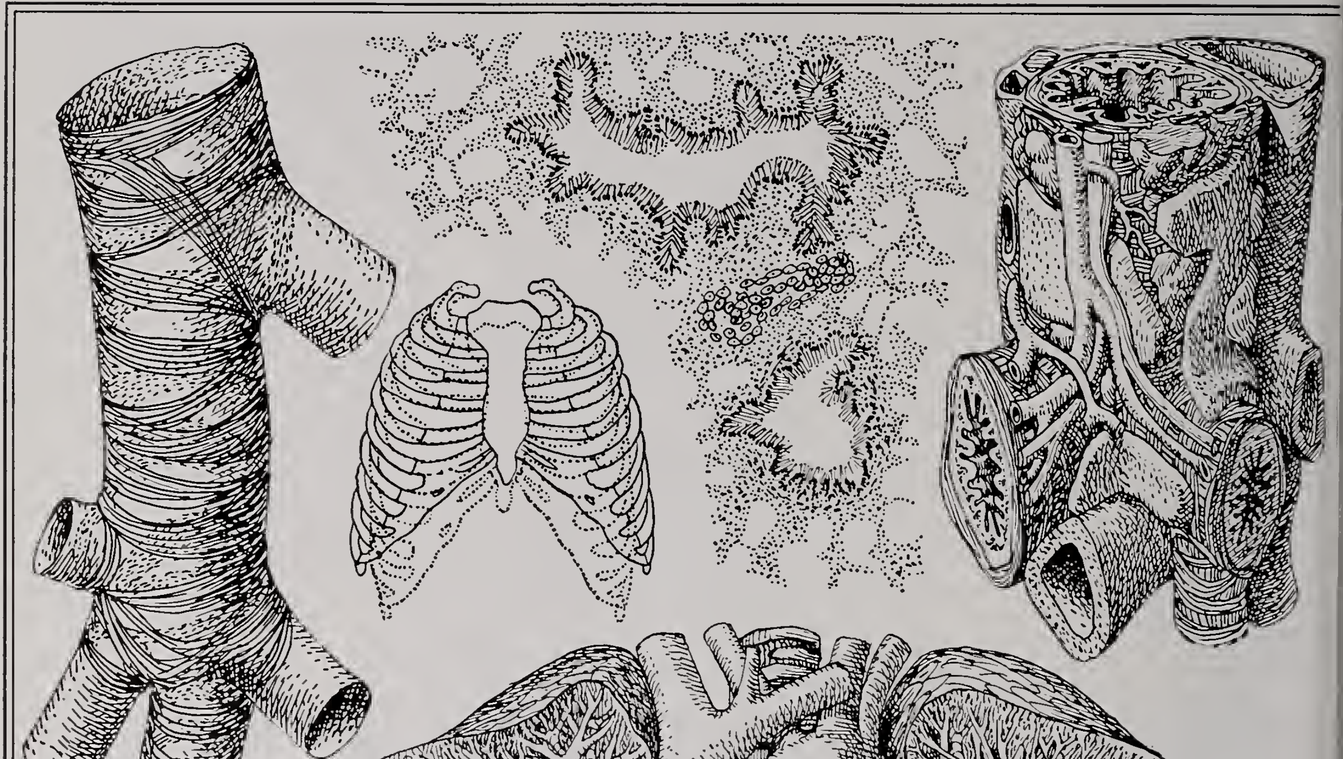
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With ARISTOCORT Triamcinolone, many asthmatic patients obtain early gratifying relief of wheezing, dyspnea and spasmodic coughing. And maintenance dosage in many cases can be surprisingly low—*often as little as a single 2 mg. tablet per day.* Yet it provides this symptomatic control—which may enable many patients to continue their customary livelihoods or regular household activities—with only minimal interference with other metabolic functions. In this respect, ARISTOCORT Triamcinolone is distinguished compared with other corticosteroids, old and new. Typical steroid problems of sodium retention and edema, euphoria, or voracious appetite and excessive weight gain rarely occur.

ARISTOCORT Triamcinolone is indicated when anti-inflammatory, anti-allergic action of glucocorticoids is desired. SIDE EFFECTS of glucocorticoids generally: Cushingoid effects, hirsutism, leucopenia, purpura, vertigo, fatigue, increased hyperglycemia, osteoporosis, gastrointestinal hemorrhage, cataracts, growth suppression in children and increased intracranial pressure. Other glucocorticoid effects thought more likely to occur with triamcinolone: reversible weakness of muscles and flushing of face.

PRECAUTIONS: ARISTOCORT Triamcinolone should be used with extreme caution in viral infection, particularly herpes simplex and chicken pox, in tubercular or fungal infection, in active peptic ulcer, acute glomerular nephritis or myasthenia gravis.

FORMULA—Tablets (scored) containing 1 mg., 2 mg. or 4 mg. of triamcinolone. Syrup—2 mg. of triamcinolone diacetate per 5 cc. (5 mg. of triamcinolone diacetate is equivalent to 4 mg. of triamcinolone).

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Triamcinolone

Maximum steroid benefits with minimum steroid penalty

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"The most important single ingredient in the restoration of normal bowel function is a soft formed bulk of proper consistency"

YOU CAN SAFELY AND EFFECTIVELY PROVIDE THIS INGREDIENT WITH

EITHER KONSYL OR L.A.FORMULA

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PLANTAGO OVATA COATING
BURTON, PARSONS & CO.

A mixture of pure hemicelluloses

Pure hemicellulose dispersed in lactose ond dextrose

L. A. FORMULA
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BURTON, PARSONS & CO.

- **in DIARRHEA** . . . Konsyl and L. A. Formula absorb free fecal water to create a formed gel and normal stools.
- **in CONSTIPATION** . . . Konsyl and L. A. Formula retain water in the stool against the strong dehydrating function of the colon.
- Since a liquid stool contains only 10 per cent more water than the hardest scybalum*

KONSYL

For the obese patient who needs calorie free medication

L.A.FORMULA

For the finicky eater who requires unsurpassed palatability

are the

the bowel normalizers of choice

Made by

BURTON, PARSONS & CO., Inc.

Since 1932 Originators of Fine Hydrophilic Colloids

Washington 27, D. C.

*Tainter, M.L. and Buchanan, O.H., Ann. N.Y. Acad. Sc. 54:438, 1954

In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain... not the patient")*.

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

Ⓡ WALLACE LABORATORIES / *Cranbury, N.J.*

CSO-9193

mudrane®

the bronchodilator
with the intermediate dose of KI

A combination of the four most widely used drugs for treatment of asthma. Each tablet contains Aminophylline 130 mg., Ephedrine HCl 16 mg., Phenobarbital 22 mg. (Warning: May be habit forming), Potassium Iodide 195 mg.—compounded for prompt absorption and balanced action, and buffered for tolerance.

Dosage in asthma, emphysema, bronchiectasis, chronic bronchitis: One tablet with a full glass of water, 3 or 4 times a day.

Precautions: The usual precautions for aminophylline-ephedrine-phenobarbital mixtures. Iodides may cause nausea, and very long use may cause goiter. Discontinue if symptoms of iodism develop. Contraindications of Iodides: Tuberculosis, pregnancy (to protect the fetus against possible depression of thyroid activity).

mudrane® **GG**

The Mudrane GG formula is identical to Mudrane except that Glyceryl Guaiacolate, 100 mg. replaces the Potassium Iodide as the mucolytic-expectorant.

Glyceryl Guaiacolate has no known side effects.

Caution: Federal law prohibits dispensing
these products without prescription

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Dispensed in bottles of 100 and 1000 tablets

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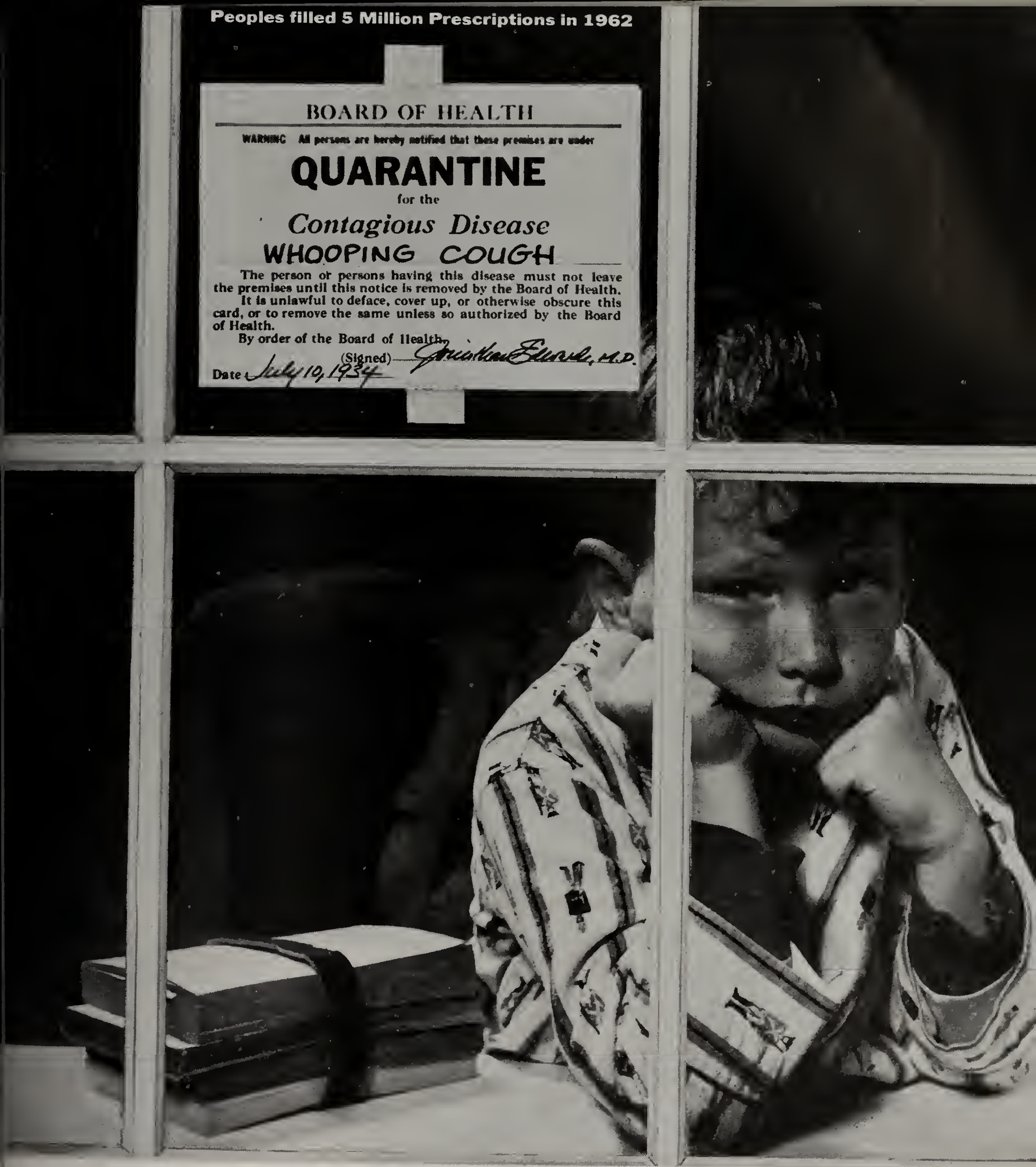
Manufacturers of ethical pharmaceuticals since 1856

Peoples filled 5 Million Prescriptions in 1962



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WARNING All persons are hereby notified that these premises are under

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The person or persons having this disease must not leave the premises until this notice is removed by the Board of Health. It is unlawful to deface, cover up, or otherwise obscure this card, or to remove the same unless so authorized by the Board of Health.

By order of the Board of Health.

(Signed) M.D.

Date July 10, 1934

Remember when you didn't go to school?

Remember how many days you spent in *bed* instead of in ss? How your parents blanched if you complained of an ache? They were so deadly afraid of mastoiditis.

Remember how easily the common cold ran into pneumonia? e bout of whooping cough that meant weeks and weeks out school? The diagnosis *"it's Scarlet Fever"* that made parents' od run cold?

How fortunate we are to be parents *today,* with a wealth of raculous medications at our service, to prevent or (at least *trol)* infectious and contagious diseases.

t Peoples Drug Stores, we're grateful for the miraculous igs that help control sore throats and earache before they erupt into serious, impairing illness. The vaccines that avert so many dread childhood diseases . . . or minimize their effects. The antihistamines that ease allergies. The vitamins that promote sound nutrition and growth.

At Peoples, our shelves are brimming with new up-to-the-minute drugs and medicines from the most reputable pharmaceutical manufacturers. And we housekeep our shelves regularly to make sure every ingredient is dependably fresh and full strength.

Don't forget: when the way your younger patient feels depends on a prescription . . . **you can depend on Peoples Drug Stores.**

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5 MILLION PRESCRIPTIONS FILLED IN 1962 . . . A MEASURE OF THE TRUST PEOPLE HAVE IN PEOPLES • PRESCRIPTION DRUG STORES

STARTING TOMORROW MORNING this capsule can help one of your overweight patients do without her favorite (fattening) foods at meals—and during all the hours in between.

Dexamyl® Spansule®
Trademark brand of sustained release capsules

Each No. 2 capsule contains 15 mg. of Dexedrine® (brand of dextro amphetamine sulfate) and 1½ gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each No. 1 capsule contains 10 mg. of Dexedrine (brand of dextro amphetamine sulfate) and 1 gr. of amobarbital [Warning, may be habit forming].

The active ingredients of the 'Spansule' capsule are so prepared that a therapeutic dose is released promptly and the remaining medication, released gradually and without interruption, sustains the effect for 10 to 12 hours.

INDICATIONS: (1) For control of appetite in overweight; (2) for mood elevation in depressive states.

USUAL DOSAGE: One 'Dexamyl' *Spansule* capsule taken in the morning.

SIDE EFFECTS: Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

CAUTIONS: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Excessive use of the amphetamines by unstable individuals may result in a psychological dependence; in these rare instances withdrawal of medication is recommended. It is generally recognized that in pregnant patients all medications should be used cautiously, especially in the first trimester.

SUPPLIED: Bottles of 50 capsules.

Smith Kline & French Laboratories *Prescribing information Jan. 1963*

winter coughs ahead...

clear the tract with Robitussin®

For the coughing patient who labors to remove tenacious mucus from his respiratory tract, Robitussin provides a remarkably potent expectorant action. It contains glyceryl guaiacolate which increases respiratory tract fluid (R.T.F.) almost 200% to "clear the tract" of cough-inducing irritants. Increased R.T.F. also permits more efficient action of bronchial and tracheal cilia to further enhance the evacuation of sputum, thus reducing cough frequency and helping the cough remove its cause.

After more than thirteen years and millions of prescriptions, no serious side effects have been reported from Robitussin. And patient acceptance has been outstanding.

A. H. ROBINS COMPANY, INC., Richmond 20, Virginia

ROBITUSSIN®

Each 5 cc. tsp. contains:

Glyceryl guaiacolate	100 mg.

ROBITUSSIN® A-C

Robitussin with antihistamine and codeine.

Each 5 cc. tsp. contains:

Glyceryl guaiacolate	100 mg.
Pheniramine maleate	7.5 mg.
Codeine phosphate (exempt narcotic)	10 mg.

Photo: N. & W. Engine No. 611, last of the famous "Class J" locomotives, on its final run between Roanoke, Va., and Williamson, W. Va., Oct. 26, 1959.

This is the season Allbee® with C is made for!

When a good old-fashioned winter proves too much for your modern-day patients, it's a comfort to know about Allbee with C. Consider its simple, rational, economical formula when patients need therapeutic amounts of B and C vitamins during the "flu" and u.r.i. season. **This is what Allbee with C is made of:** Thiamine mononitrate (B_1), 15 mg.; Riboflavin (B_2), 10 mg.; Pyridoxine HCl (B_6), 5 mg.; Nicotinamide, 50 mg.; Calcium pantothenate, 10 mg.; Ascorbic acid (vitamin C), 300 mg.

A. H. Robins, Co., Inc. Richmond 20, Va.

Colds haven't changed—but relief has with NTz® NASAL SPRAY

NTz Nasal Spray gives on-the-spot relief for stopped-up noses instantly. Recommended by doctors for 10 years, it provides not one, but three powerful ways to fast relief.

In a carefully balanced formula, NTz contains:

Neo-Synephrine® HCl to shrink swollen nasal tissues and provide enough space for breathing

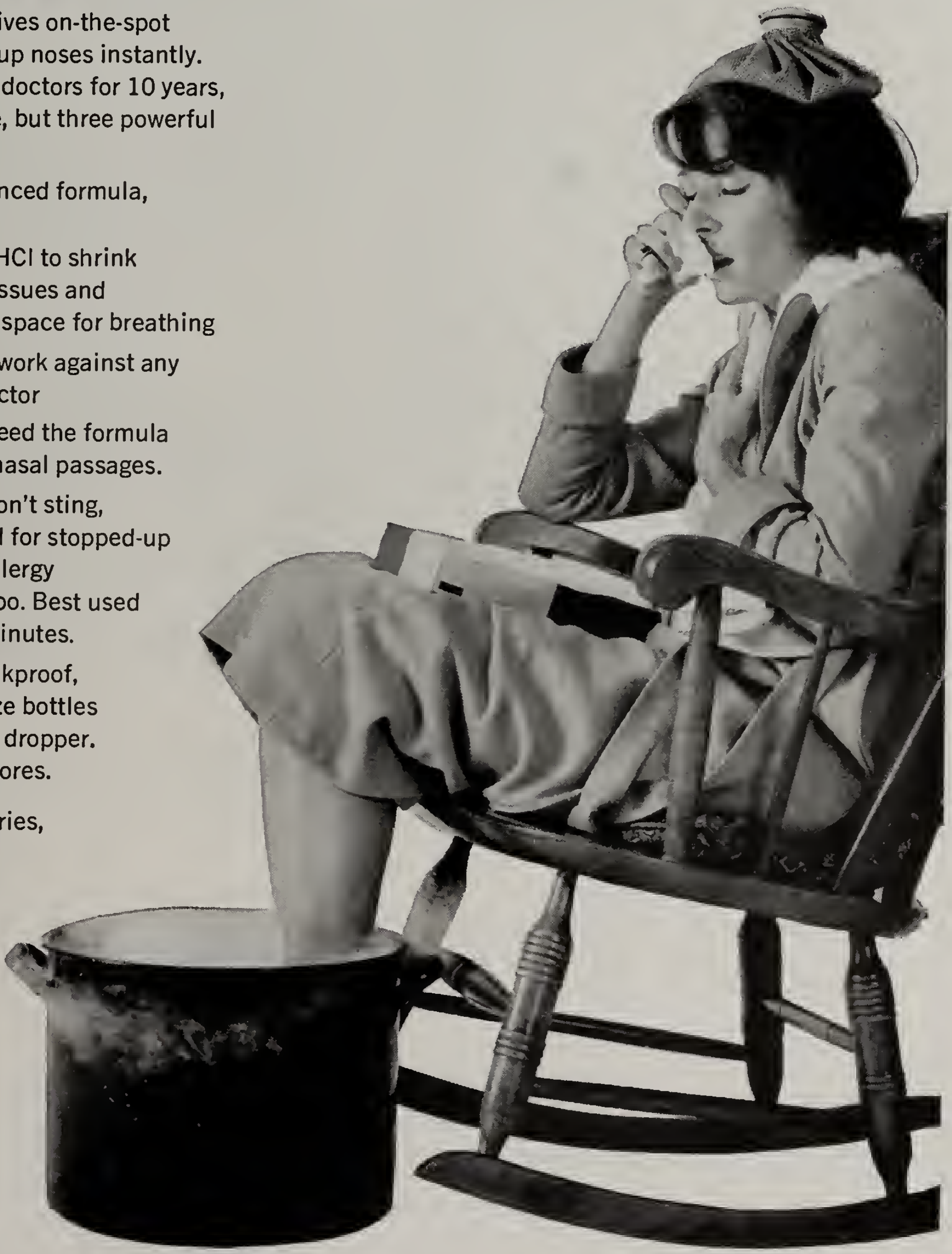
Thenfadil® HCl to work against any local allergic factor

Zephiran® Cl to speed the formula through **all** the nasal passages.

NTz Nasal Spray won't sting, won't irritate. Good for stopped-up noses caused by allergy and for sinusitis, too. Best used **twice** within five minutes.

NTz supplied in leakproof, pocket-size squeeze bottles and in bottles with dropper. Sold only in drugstores.

Winthrop Laboratories,
New York 18, N. Y.



Winthrop

NTz, Neo-Synephrine (brand of phenylephrine), Thenfadil (brand of thenyldiamine) and Zephiran (brand of benzalkonium, as chloride, refined), trademarks reg. U. S. Pat. Off.

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E. K. Cook & Co., Inc. **Bethesda, Maryland**

or the tense and anxious patient...
sustained relief for 10 to 12 hours

Smooths out emotional peaks and valleys

eprospan'-400 brand of meprobamate contains 400 g. in sustained-release form. One capsule smooths ut the anxious patient's emotional peaks and valleys r 10 to 12 hours — and provides these other advan-ges:

Especially suitable for maintenance therapy. Patients whose anxiety has diminished to a mild or moderate level still require a certain amount of tranquilization throughout the day. Sustained-release action is ideally suited to this type of patient.

Simpler dosage schedule. Since one capsule of 'Meprospan'-400 (meprobamate, sustained release) acts 10 to 12 hours, the patient enjoys a much simpler dosage schedule than with tablets — and is less likely to forget to take the medicine.

de Effects: Rarely, skin reactions. May increase ects of excessive alcohol. Use with care in patients with suicidal tendencies. Massive overdosage may produce coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence in patients with history of drug or alcohol addiction.

Available: *'Meprospan'-400* (meprobamate, sustained release) contains meprobamate 400 mg. *'Meprospan'-200* (meprobamate, sustained release) contains meprobamate 200 mg. Both potencies in bottles of 30. **Usual dosage:** One 400 mg. capsule or two 200 mg. capsules at breakfast; repeat with evening meal.

Meprospan®-400
meprobamate 400 mg.
sustained release

WALLACE LABORATORIES / *Cranbury, N.J.*

C-9188

In trauma,
whether it's
sutures, plaster,
splint or sling...

remember
'Empirin'
Compound
to relieve pain

100
'EMPIRIN'®
Compound
Each tablet contains
Phenacetin .... gr. 2-1/2
Aspirin .... gr. 3-1/2
Caffeine .... gr. 1/2
For relief of simple headache, neuralgia, muscular aches and pains, discomforts and fever of colds.
DIRECTIONS.—Adults, 1 or 2 tablets. May be repeated in 2 hours. Do not exceed 6 in 24 hours. Children 6 to 12 years, 1/2 adult dose. If pain persists or recurs frequently, and for dosage for children under 6, consult your physician.
Warning.—Keep this and all medicines out of children's reach.
BURROUGHS WELLCOME & CO.
(U.S.A.) Inc., Tuckahoe, N.Y.
Made in U.S.A.

Also: 'Empirin'® Compound with Codeine Phosphate*
gr. ⅛ – No. 1/gr. ¼ – No. 2/gr. ½ – No. 3/gr. 1 – No. 4
*Warning—may be habit forming

"They keep saying I'm sloppy!"

Nicozol® helps you restore your geriatric patients' interest in themselves

NICOZOL therapy can help you brighten the outlook of your aging patients who tend towards (1) untidiness, (2) irritability, (3) incompatibility, (4) lack of interest, and (5) loss of memory or alertness.

The NICOZOL formula helps improve mental acuity, increase the supply and use of oxygen in the brain, improve peripheral circulation—without excitation, depression, or other untoward effects.

NICOZOL can help you keep your aging patients actively alert and at ease with themselves, their families, and others.

Supplied: NICOZOL tablets (and capsules) in bottles of 100 and 1000. NICOZOL elixir in pints and gallons.

Precautions: May produce overstimulation in high doses. Discontinue if muscular twitchings or clonic convulsions occur. The flush produced in sensitive individuals is transient and harmless.

Average Dose: 1 to 2 tablets (or capsules) 3 times a day. 1 teaspoonful elixir 3 times a day.

Formula: Each tablet or capsule contains:
Pentylenetetrazol............100 mg.
Nicotinic Acid..................50 mg.
Each teaspoonful (5 cc.) elixir contains:
Pentylenetetrazol............200 mg.
Nicotinic Acid...............100 mg.
(as the sodium salt)
Alcohol.........................5%

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LABORATORIES
Bryn Mawr, Pa., Winston-Salem, N.C.

NICOZOL®

Tension?
Hypertension?
Control both with Serpasil®
(reserpine CIBA)

Patients with high blood pressure plus one or more symptoms of tension—restlessness, rapid heart rate, excessive sweating, agitation—benefit from the distinctive calming action of Serpasil (reserpine). It shields the tense hypertensive patient from nervousness that raises his blood pressure. Result: pressure goes down, heart rate decreases. Useful in all grades of hypertension, either alone or as a background agent.

Average Dosage: 0.25 to 0.5 mg. daily.

Side Effects: Occasional: lassitude, drowsiness, nasal congestion, looseness of stools, increased frequency of defecation. Rare: anorexia, headache, bizarre dreams, nausea, dizziness. Nasal congestion and increased tracheobronchial secretions may occur in babies of mothers treated with reserpine.

Cautions: Severe mental depression has appeared in a small percentage of patients, primarily in a dosage above 1 mg. daily. Usually the patient had a pre-existing, incipient, endogenous depression which was unmasked or accentuated by reserpine. When the drug is discontinued, depression usually disappears, but hospitalization and shock therapy are sometimes required. Daily dosage above 0.25 mg. is contraindicated in patients with a history of mental depression or peptic ulcer. Withdraw Serpasil (reserpine) 2 weeks before surgery, if possible. For emergency surgical procedures, vagal blocking agents should be given parenterally to prevent or reverse hypotension and/or bradycardia.

Supplied: Tablets, 0.1 mg., 0.25 mg. and 1 mg.

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A special margarine for the atherosclerosis diet

The latest report* in the *JAMA* on atherosclerosis diets states, "...it appears logical to attempt to reduce high concentrations of cholesterol and other serum lipids as an experimental therapeutic procedure."

Since this report recognizes table spreads as an important source of dietary fat, we believe that it is in your professional interest to know about the fatty-acid composition of Mrs. Filbert's Corn Oil Margarine.

Mrs. Filbert's Corn Oil Margarine is a special margarine** made from 100% corn oil, over 50% of which retains its liquid characteristics.

Because of its high linoleic content, its ratio of polyunsaturates to saturates is about 1.7 to 1... and equals the highest level available today in *any* corn oil margarine.

Of the total fatty acid content, 28% is *cis-cis linoleic acid.*

Moreover, when you recommend Mrs. Filbert's Corn Oil Margarine, your patient is assured of receiving unmatched taste and flavor satisfaction —an important consideration in promoting adherence to any therapeutic regimen.

*AMA Council on Foods and Nutrition: The Regulation of Dietary Fat, *JAMA* 181:411-423 (August 4, 1962).

**AMA Council on Foods and Nutrition: Composition of Certain Margarines, *JAMA* 179:719 (March 3, 1962).

Mrs. Filbert's
100% CORN OIL
CORN OIL MARGARINE

Made from 100% corn oil with liquid corn oil as its major ingredient

For additional information—including detailed listings of component characteristics—please write to us.

J. H. FILBERT, Inc.

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The Blood Service Plan supplies or replaces all the blood and plasma needed by members. Each member is guaranteed protection for unlimited blood replacement anywhere during the membership period.

Patients are relieved of all the problems of blood replacement. All they must do is inform Blood Service Plan headquarters. Plans are available to suit individual needs—for groups, for families, for husbands and wives, for individuals.

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NATIONAL AND REGIONAL MEETINGS

December 1–4: American Medical Association (Clinical Meeting). Portland Hilton Hotel and Memorial Coliseum, Portland, Ore. Address: Dr. F. J. L. Blasingame, *Executive Vice President,* 535 North Dearborn Street, Chicago 10, Ill.

December 7–8: International Symposium on Hemophilia. Sheraton-Park Hotel, Washington. Address: Dr. Kenneth M. Brinkhous, Chairman, Department of Pathology, School of Medicine, University of North Carolina, Chapel Hill, N. C.

December 8–11: American Society of Hematology. Statler-Hilton Hotel, Washington. Address: Dr. Charles Rath, Treasurer, Georgetown University Hospital, Washington 7, D.C.

December 10–12: Southern Surgical Association. The Homestead, Hot Springs, Va. Address: Dr. J. D. Martin, Jr., *Executive Secretary,* Emory University, Atlanta 22, Ga.

December 14–15: The Academy of Psychoanalysis. Hotel Commodore, New York City. Address: Dr. Alfred H. Rifkin, *Secretary,* 125 East 65th Street, New York 21, N. Y.

January 18–23: American Academy of Orthopaedic Surgeons. Palmer House, Chicago. Address: Mr. John K. Hart, *Executive Secretary,* 29 East Madison Street, Chicago 2, Ill.

January 20–23: Hahnemann Medical College and Hospital Postgraduate Course on Cardiovascular Drug Therapy. Marriott Motor Hotel, Philadelphia. Address: Miss Sage Rosen, Executive Secretary, Postgraduate Education, Department of Medicine, Hahnemann Medical College and Hospital, 230 North Broad Street, Philadelphia 2, Pa.

January 27–29: Sectional Meeting, The American College of Surgeons. Lord Baltimore Hotel, Baltimore, Md. Address: Dr. Samuel J. Harbison, *Secretary,* 40 East Erie Street, Chicago 11, Ill.

January 30–31: Symposium on Scintiscanning in Clinical Medicine. Department of Radiology, Bowman Gray School of Medicine, Winston-Salem, N. C. Address: Dr. J. L. Quinn III, Nuclear Medicine, Bowman Gray School of Medicine, Winston-Salem 7, N. C.

March 1–6: 20th Annual Congress of American College of Allergists. The Americana, Bal Harbour, Miami Beach, Fla. Address: Dr. John D. Gillaspie, *Treasurer,* 2141 14th Street, Boulder, Colo.

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Protects your angina patient better than vasodilators alone

'Miltrate' contains both pentaerythritol tetranitrate, which dilates the patient's coronary arteries, and meprobamate, which relieves his anxiety about his condition. Thus 'Miltrate' protects your angina patient better than vasodilators alone.

Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma.

Dosage: 1 or 2 tablets *before meals* and at bedtime. Individualization required.
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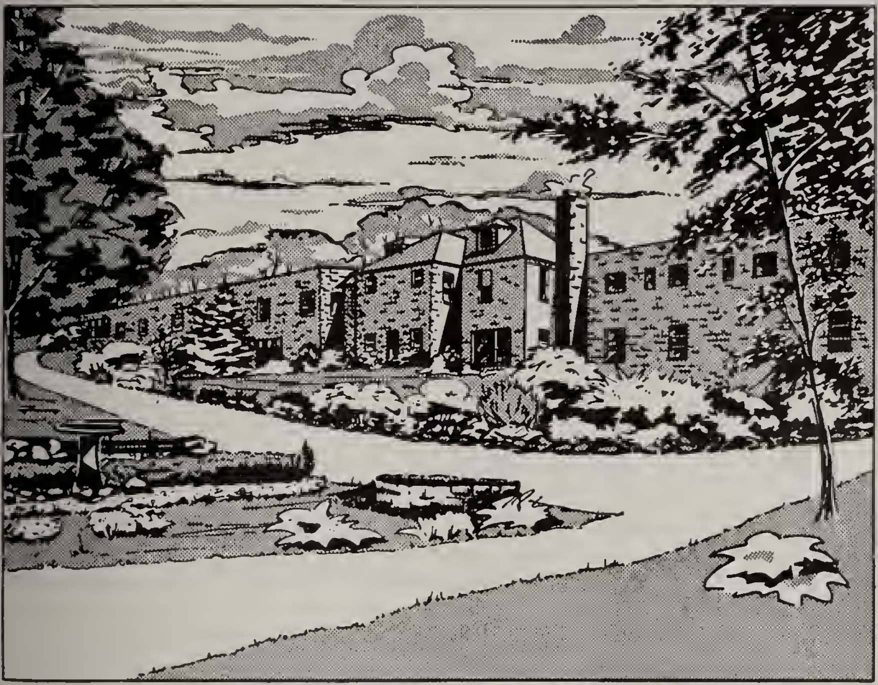

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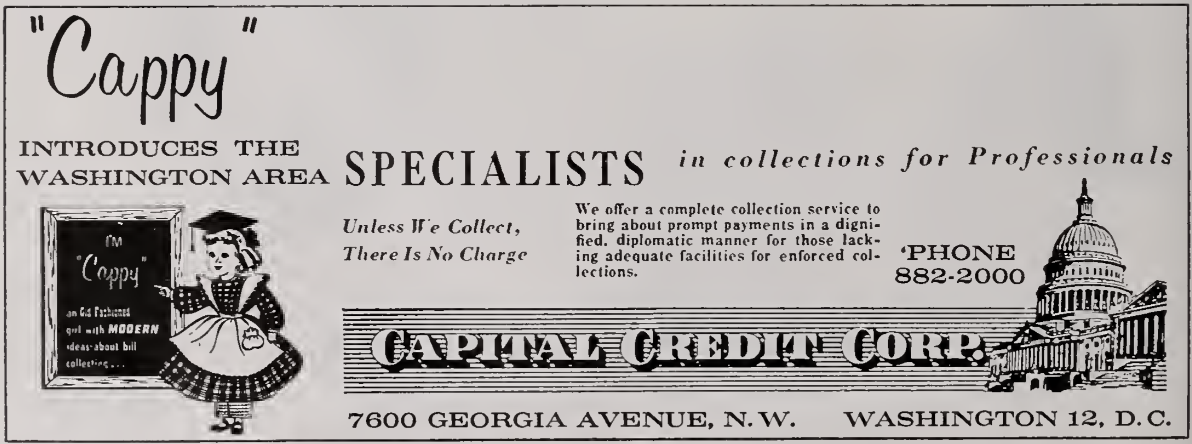
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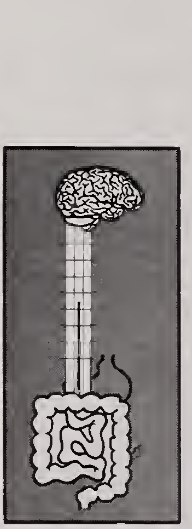

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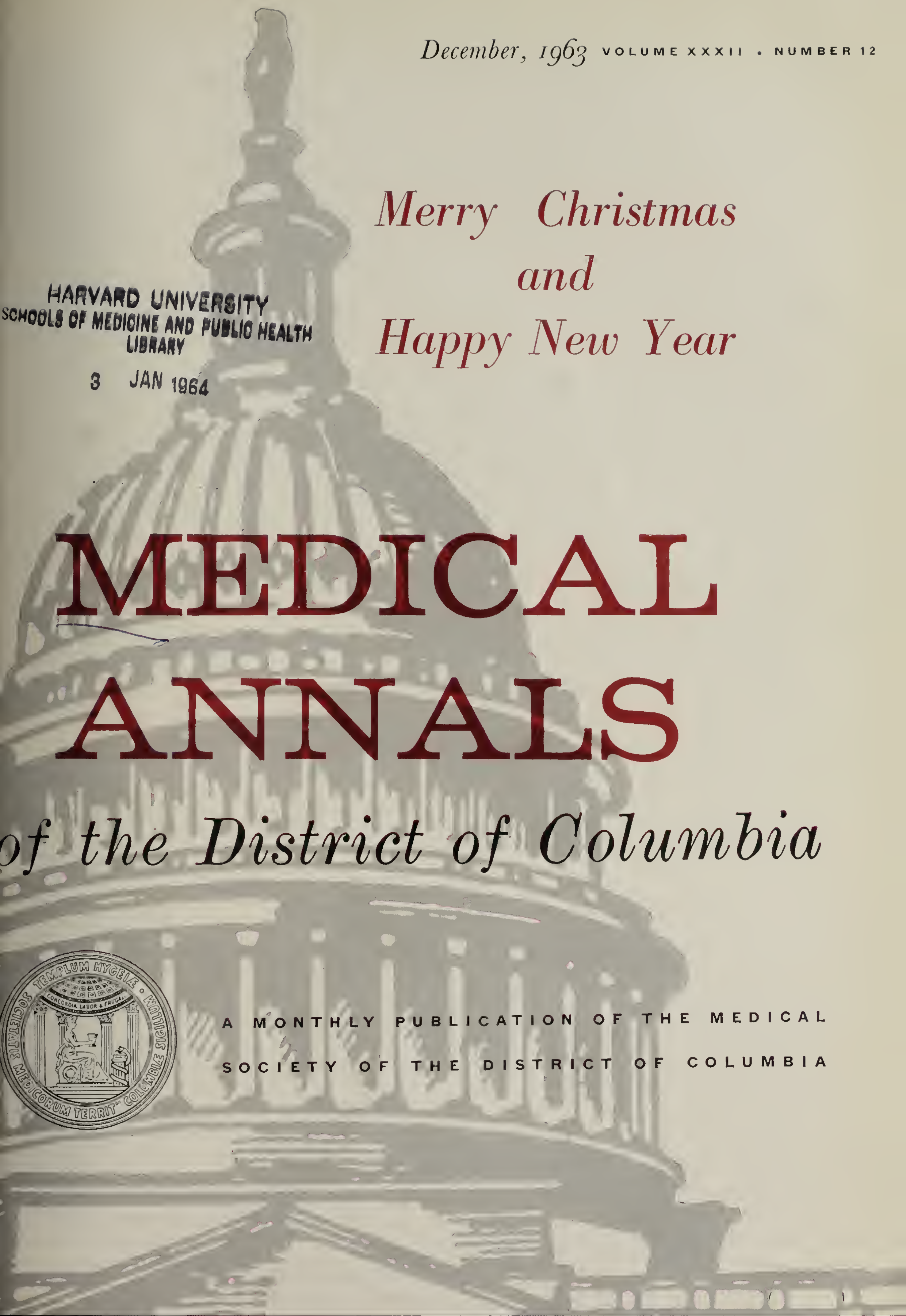

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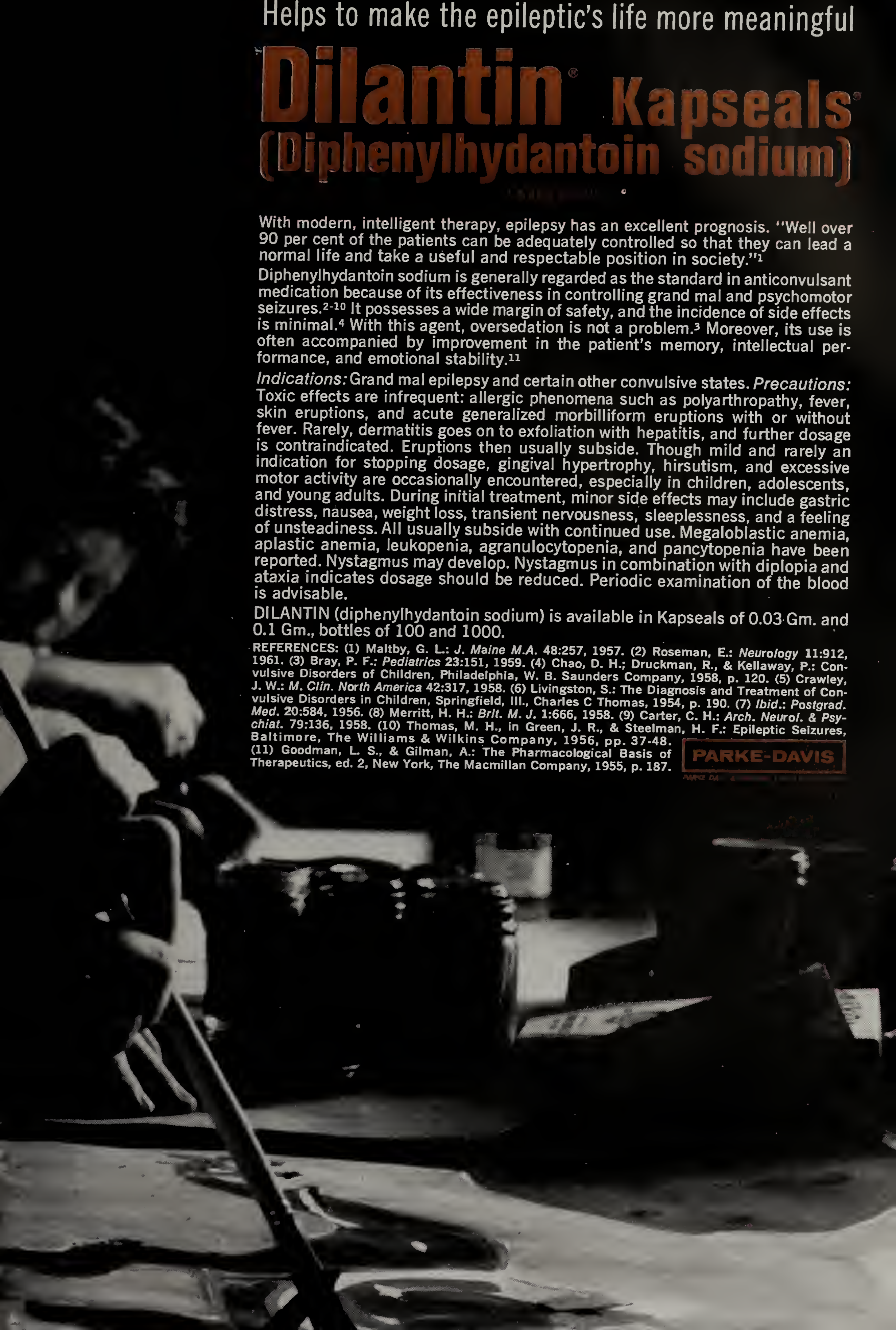

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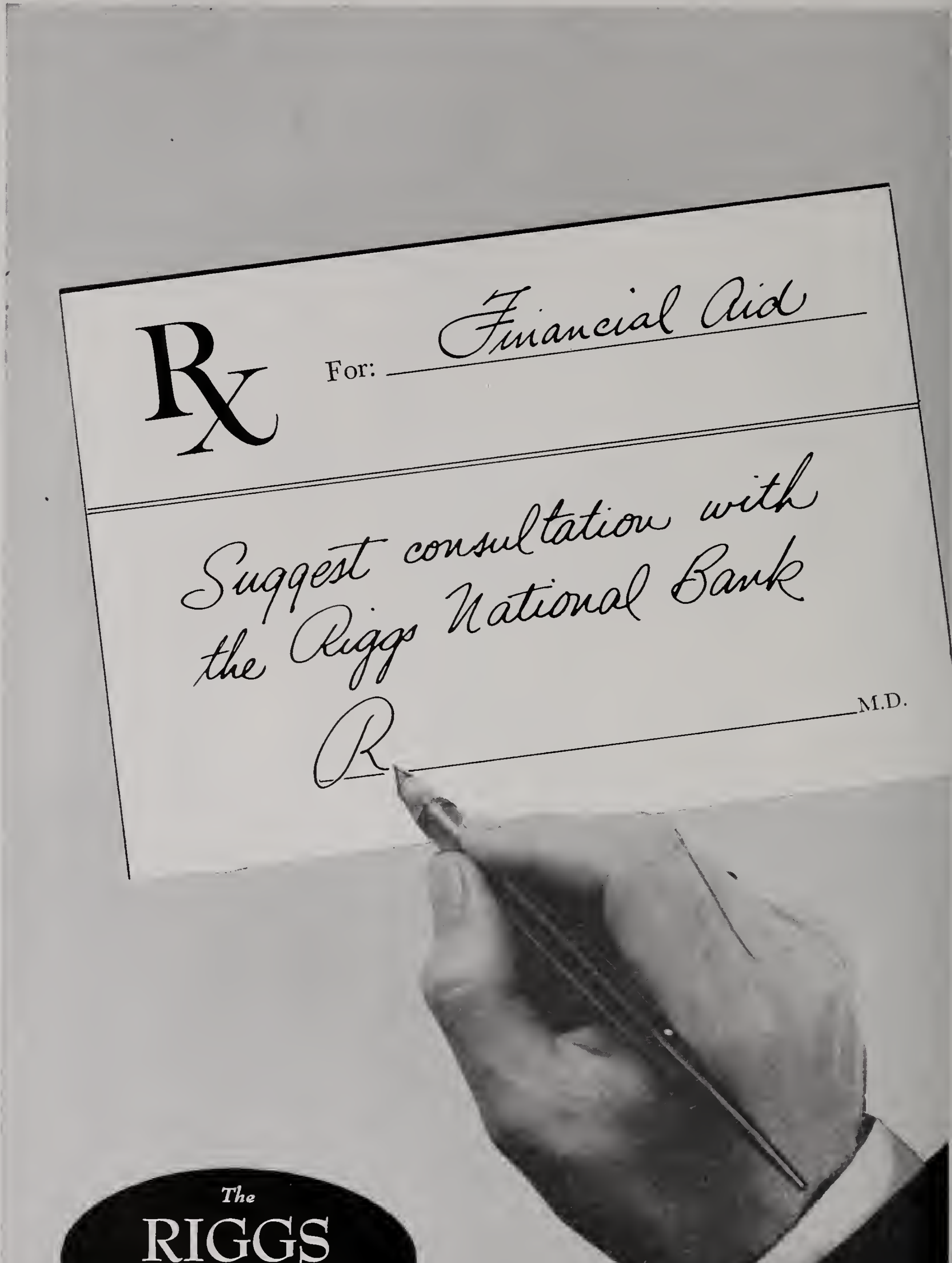

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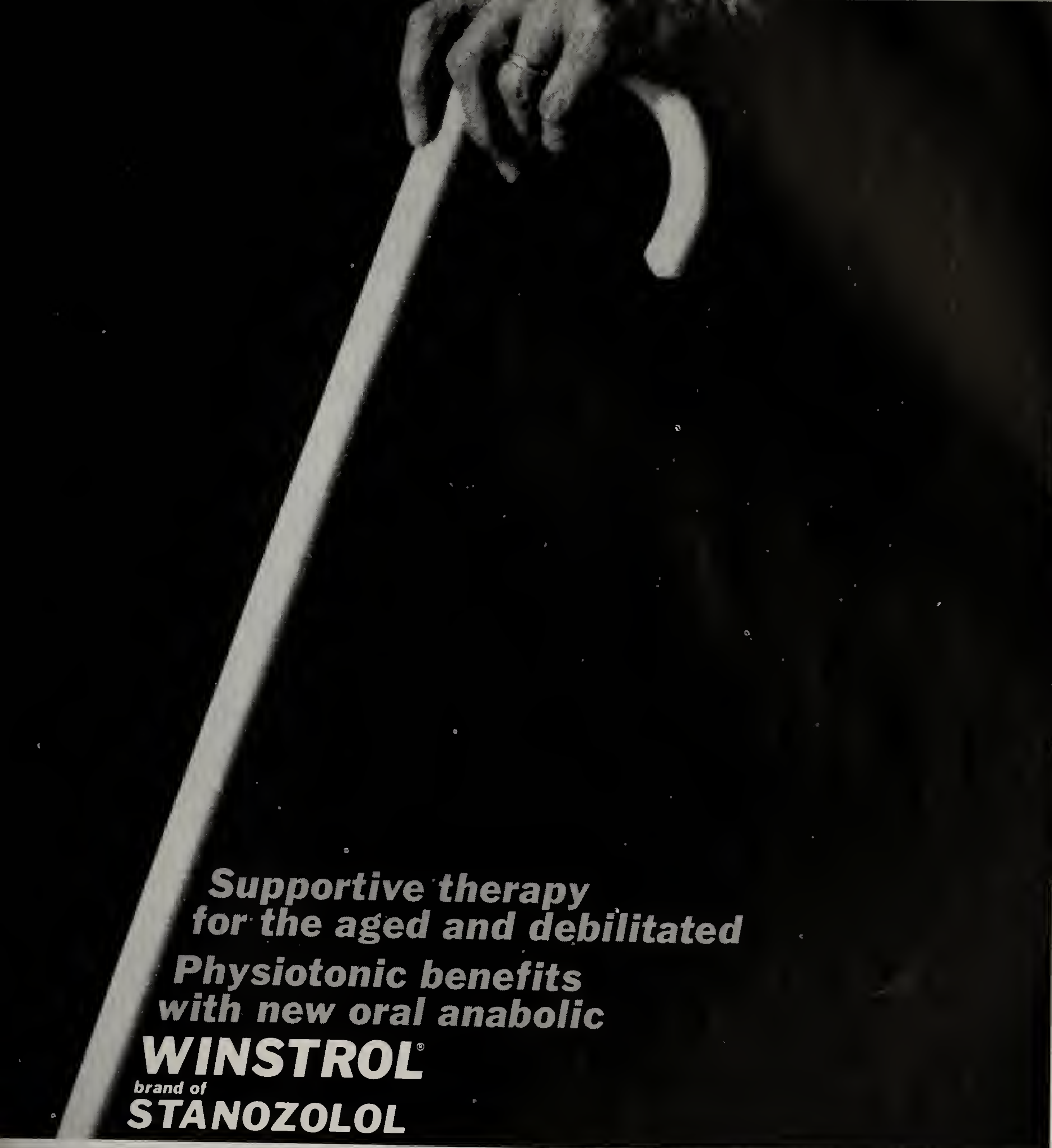

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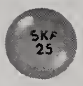

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This is why there is nothing "new" about Thorazine (chlorpromazine, SK&F). This is why it remains the first choice in many conditions—and the standard against which other agents are inevitably compared.

This is why it is one of the fundamental drugs in medicine.

SMITH KLINE & FRENCH
LABORATORIES, PHILADELPHIA

SK&F

Introducing A New Sulfonamide

SULFABID

BRAND OF SULFAPHENAZOLE

A POTENT, LOW DOSAGE SULFONAMIDE DISTINGUISHED BY ITS INCREASED MARGIN OF SAFETY.

AN INCREASED MARGIN OF SAFETY. . .

The need for critical dosage adjustment to avoid toxic manifestations, is minimized when the sulfonamide chosen is SULFABID (brand of sulfaphenazole).

With SULFABID (sulfaphenazole), effective blood and plasma levels are achieved with a convenient twelve-hour dosage schedule, yet its urinary solubility and rate of excretion combine to provide a high degree of safety with minimal risk of excessive drug accumulation. In order to demonstrate this high degree of safety, Essellier and co-workers (1), personally took 25 grams daily for five days . . . over *six times* the recommended therapeutic maintenance dosage level without experiencing intolerance.

SULFABID (sulfaphenazole) has been critically evaluated in the treatment of thousands of patients throughout the western world, more than one-third of whom were infants and children. The results have established that SULFABID (sulfaphenazole) is well tolerated, and that in appropriate dosage it produces satisfactory therapeutic effects.

SULFABID (sulfaphenazole) is indicated in a wide variety of infections caused by sulfonamide—susceptible bacteria, ... Abscesses, Bronchitis, Cellulitis, Cystitis, Furunculosis, Otitis media, Pharyngitis, Prostatitis, Pyelonephritis, Sinusitis, Tonsillitis, Urethritis and wound infections.

An informative brochure . . . with clinical findings and bibliography is available from your Physicians Products Medical Service Representative or by mail request.

THESE CASE STATISTICS BASED UPON 33 PUBLISHED REPORTS OF THERAPEUTIC RESPONSE TO SULFABID * (Sulfaphenazole)

Indications	No. of Patients	Response*	
		Recovered	None
Biliary tract infections	24	18	6
Bronchitis	233	190	21
Pharyngitis, laryngitis	185	155	16
Other upper respiratory infections	261	199	32
Dysentery, enteritis	49	46	3
Febrile abortion	39	32	7
Pelvic Inflammatory disease—adnexitis, endometritis, parametritis, etc.	523	484	6
Lymphadenitis, sinusitis	32	28	3
Otitis	159	116	16
Puerperal infections	140	54	55
Skin diseases—furunculosis, pyoderma, erysipelas, etc.	78	54	8
Surgical infections	206	199	7
Tonsillitis	125	122	1
Urogenital infections—			
prophylaxis	269	222	58
therapy	989	723	139
Miscellaneous	393	292	71
	3705	2934	449
		79%	12%

*9% unreported

(1) Essellier, A. F., H. Hunsiker and R. Goldsand; Ibid 88:813, 1958.

Contraindications

☐ SULFABID (Sulfaphenazole) is contraindicated in patients known to be sensitive to sulfonamides. Like most sulfonamides and certain other drugs, its use is also inadvisable in treating premature infants and in full-term infants for the first week of life due to underdeveloped enzyme systems and liver and renal function. For the same reasons, SULFABID (Sulfaphenazole) should be used with caution at term in pregnancy.

Precautions

While the reported incidence of reactions to SULFABID (Sulfaphenazole) is low, the usual precautions in sulfonamide therapy should be observed, including maintenance of adequate fluid intake. In the event of headache, nausea or vomiting, dosage should be reduced or discontinued; if urticaria, rash, fever or hematuria occur, the medication should be discontinued. When SULFABID (Sulfaphenazole) is used intermittently or for prolonged periods, blood counts should be performed regularly to detect the possible occurrence of blood dyscrasias. Administration of the drug should be stopped immediately if alterations are observed in the hematopoietic system. Patients with impaired renal function should be followed closely in order to avoid excessive drug accumulation.

Dosage:

SULFABID (Sulfaphenazole) is administered orally as tablets or as a suspension twice daily for five to seven days or until the patient remains asymptomatic for 48 hours.

	Initial Dose	Every 12 Hrs. Thereafter
Adults:		
Moderate to severe infections—	6 tablets (3 gm.) or 2 tablespoonfuls (30 cc.) of Suspension	2 tablets (1 gm.) or 2 teaspoonfuls (10 cc.) of Suspension
Mild or urinary tract infections—	4 tablets (2 gm.) or 4 teaspoonfuls (20 cc.) of Suspension	2 tablets (1 gm.) or 2 teaspoonfuls (10 cc.) of Suspension
Children:	30 mg./lb. 1 teaspoonful of Suspension or 1 tablet per 17 lbs.	15 mg./lb. ½ teaspoonful of Suspension or ½ tablet per 17 lbs.

Incidence of Side Effects

In extensive clinical experience, the over-all incidence of side effects with SULFABID (Sulfaphenazole) has been low. Side effects were mainly limited to complaints of stomach upset and nausea, and these were mild and of short duration.

Supplied

*Tablets: 0.5 Gm., bottles of 50, 250, 1000.

*Suspension: 0.5 Gm. (500 mg) per 5 cc. (teaspoon), bottles of 50 cc. (non-spillable, with a dropper marked for ¼ and ½ teaspoon), and 1 pint.

SULFABID

BRAND OF SULFAPHENAZOLE

PHYSICIANS PRODUCTS CO., INC.
PETERSBURG, VIRGINIA

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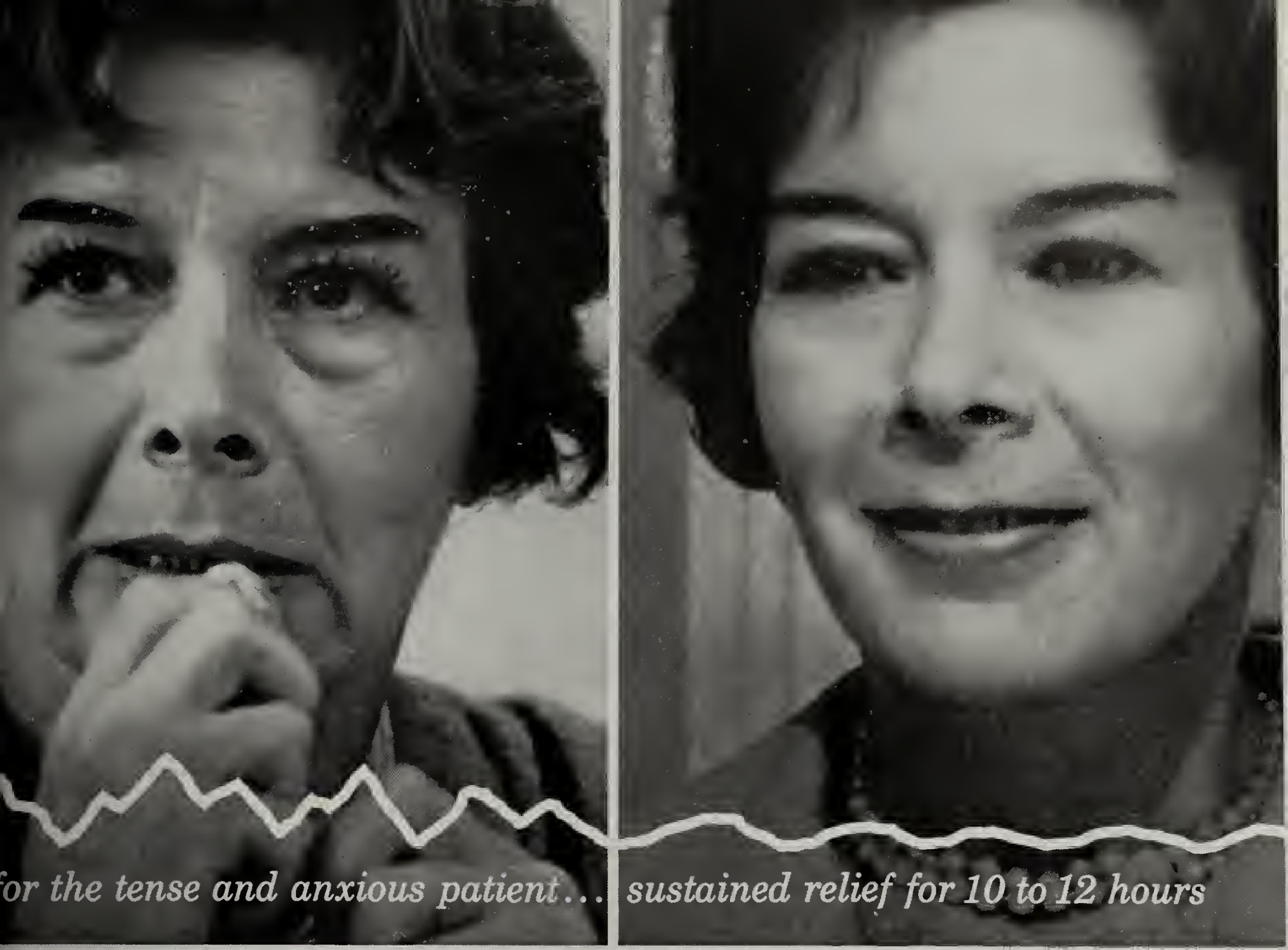
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sustained relief for 10 to 12 hours

Smooths out emotional peaks and valleys

Meprospan'-400 brand of meprobamate contains 400 g. in sustained-release form. One capsule smooths ut the anxious patient's emotional peaks and valleys r 10 to 12 hours — and provides these other advanges:

Especially suitable for maintenance therapy. Patients whose anxiety has diminished to a mild or moderate level still require a certain amount of tranquilization throughout the day. Sustained-release action is ideally suited to this type of patient.

Simpler dosage schedule. Since one capsule of 'Meprospan'-400 (meprobamate, sustained release) acts 10 to 12 hours, the patient enjoys a much simpler dosage schedule than with tablets — and is less likely to forget to take the medicine.

de Effects: Rarely, skin reactions. May increase fects of excessive alcohol. Use with care in patients with suicidal tendencies. Massive overdosage may produce coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence in patients with history of drug or alcohol addiction.

Available: *'Meprospan'-400* (meprobamate, sustained release) contains meprobamate 400 mg. *'Meprospan'-200* (meprobamate, sustained release) contains meprobamate 200 mg. Both potencies in bottles of 30. **Usual dosage:** One 400 mg. capsule or two 200 mg. capsules at breakfast; repeat with evening meal.

Meprospan®-400
meprobamate 400 mg.
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It's a long walk from almost *anywhere* for anyone suffering the excruciating, itching discomfort of *pruritus vulvae.* ARISTOCORT Triamcinolone Acetonide Cream is highly active against the embarrassing and intolerable irritation of pruritus ani and vulvae. Sparing application to the affected area—3 to 4 times daily—usually provides rapid relief. And when excoriation of the area has led to infection, the choice of NEO-ARISTOCORT Neomycin Sulfate-Triamcinolone Acetonide will assure activity against a wide range of skin pathogens. A possible side effect may be local skin sensitization due to neomycin. Contraindications (both forms): tuberculosis of the skin, herpes simplex, and chicken pox. Prescribe tubes of 5 or 15 Gm. Also available in ½ lb. jars.

Aristocort® TOPICAL CREAM 0.1% AND OINTMENT 0.1%
Triamcinolone Acetonide

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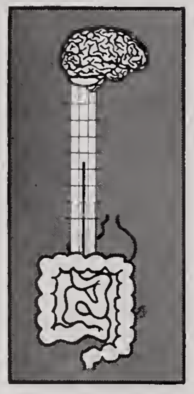
"The G-I tract is the barometer of the mind"

BELBARB®

SEDATIVE ANTISPASMODIC

Each scored white tablet contains: ¼ gr. Phenobarbital; 0.0072 mg. Hyoscine Hydrobromide; 0.024 mg. Atropine Sulfate; and 0.128 mg. Hyoscyamine Hydrobromide. **BELBARB NO. 2**—Same as Belbarb but with ½ gr. Phenobarbital. **BELBARB ELIXIR**—Each 5 ml. is equivalent to one Belbarb tablet.



"The G-I tract is the barometer of the mind"

Belbarb soothes the agitated mind and calms G-I spasm through the central effect of phenobarbital and the synergistic action of belladonna alkaloids on the G-I tract.

Indications: Belbarb is of particular value in conditions associated with visceral smooth muscle spasm and tension states, such as anxiety reactions, nervous tension, visceral spasm, irritable bowel syndrome, urinary tract spasm, peptic ulcer and hypertension.

Dose: TABLETS: 1 tablet q.i.d. ½ hour before meals and at bedtime, or as directed by physician. ELIXIR: Adults: 1 teaspoon q.i.d. Children 3-12 years: ¼ to 1 teaspoon q.i.d.

Warning: May be habit forming. **Caution:** Do not use in patients with glaucoma or in elderly patients with prostatic hypertrophy.

Send for samples and literature.

CHARLES C. HASKELL & COMPANY, Richmond, Virginia

Division of ARNAR-STONE LABORATORIES, INC.

in
low back
pain

For comprehensive control of the whole pain complex... helps the whole patient

Like a triad, the action of Trancogesic is direct and simple as 1,2,3. Its tranquilaxant component — chlormezanone — 1. reduces emotional reaction to pain . . . 2. decreases skeletal muscle spasm . . . and 3. its aspirin component dims the patient's perception of pain. Thus, Trancogesic controls the *whole* pain complex, helps the *whole* patient — *with unsurpassed tolerance.*

Each tablet of Trancogesic contains 100 mg. of chlormezanone and 300 mg. (5 grains) of aspirin. The usual adult dosage is 2 tablets of Trancogesic three or four times daily; the dosage suggested for children from 5 to 12 years is 1 tablet three or four times daily. Reactions to Trancogesic have been minor — gastric distress, and an occasional weakness, sedation or dizziness. Ordinarily, these may be reversed by a reduction in dosage or temporary withdrawal of the drug. Trancogesic is contraindicated in persons known or suspected to have an idiosyncrasy to acetylsalicylic acid. WINTHROP LABORATORIES, NEW YORK 18, N. Y.

TRANCOGESIC*
CHLORMEZANONE with ASPIRIN
100 MG. 300 MG.

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Nicozol® helps you restore your geriatric patients' interest in themselves

NICOZOL therapy can help you brighten the outlook of your aging patients who tend towards (1) untidiness, (2) irritability, (3) incompatibility, (4) lack of interest, and (5) loss of memory or alertness.

The NICOZOL formula helps improve mental acuity, increase the supply and use of oxygen in the brain, improve peripheral circulation—without excitation, depression, or other untoward effects.

NICOZOL can help you keep your aging patients actively alert and at ease with themselves, their families, and others.

Supplied: NICOZOL tablets (and capsules) in bottles of 100 and 1000. NICOZOL elixir in pints and gallons.

Precautions: May produce overstimulation in high doses. Discontinue if muscular twitchings or clonic convulsions occur. The flush produced in sensitive individuals is transient and harmless.

Average Dose: 1 to 2 tablets (or capsules) 3 times a day. 1 teaspoonful elixir 3 times a day.

Formula: Each tablet or capsule contains:

Pentylenetetrazol	100 mg.
Nicotinic Acid	50 mg.

Each teaspoonful (5 cc.) elixir contains:

Pentylenetetrazol	200 mg.
Nicotinic Acid (as the sodium salt)	100 mg.
Alcohol	5%

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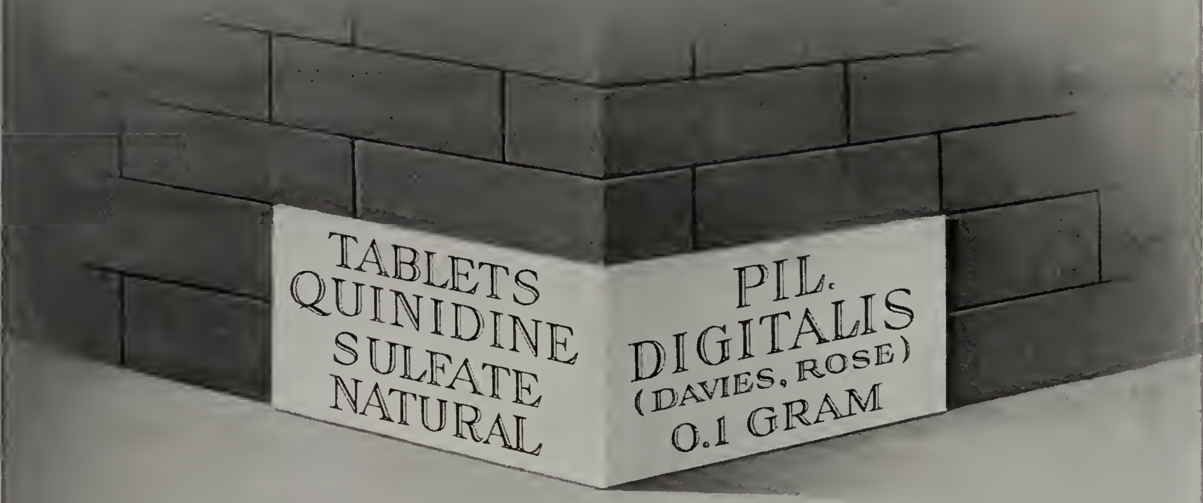
NICOZOL®

A CORNERSTONE OF CARDIAC THERAPY



The Dictionary defines a cornerstone as something of fundamental importance, just as Pil. Digitalis, (Davies, Rose) and Tablets Quinidine Sulfate Natural (Davies, Rose) are of fundamental importance in treating your cardiac patients. These preparations represent 60 years of experience and dependability in the manufacture of pharmaceuticals.

Pil. Digitalis (Davies, Rose), 0.1 Gram (approx. 1½ grains) which comprise the entire properties of the leaf, provide a dependable and effective means of digitalizing the cardiac patient, and of maintaining the necessary saturation.

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In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and
a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain...not the patient")*.

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

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Convenient parking facilities adjoining Funeral Home

Important news in cardiac therapy

Two new clinical reports document successful long-term treatment of ischemic heart disease with Persantin®, brand of dipyridamole

See next
3 pages

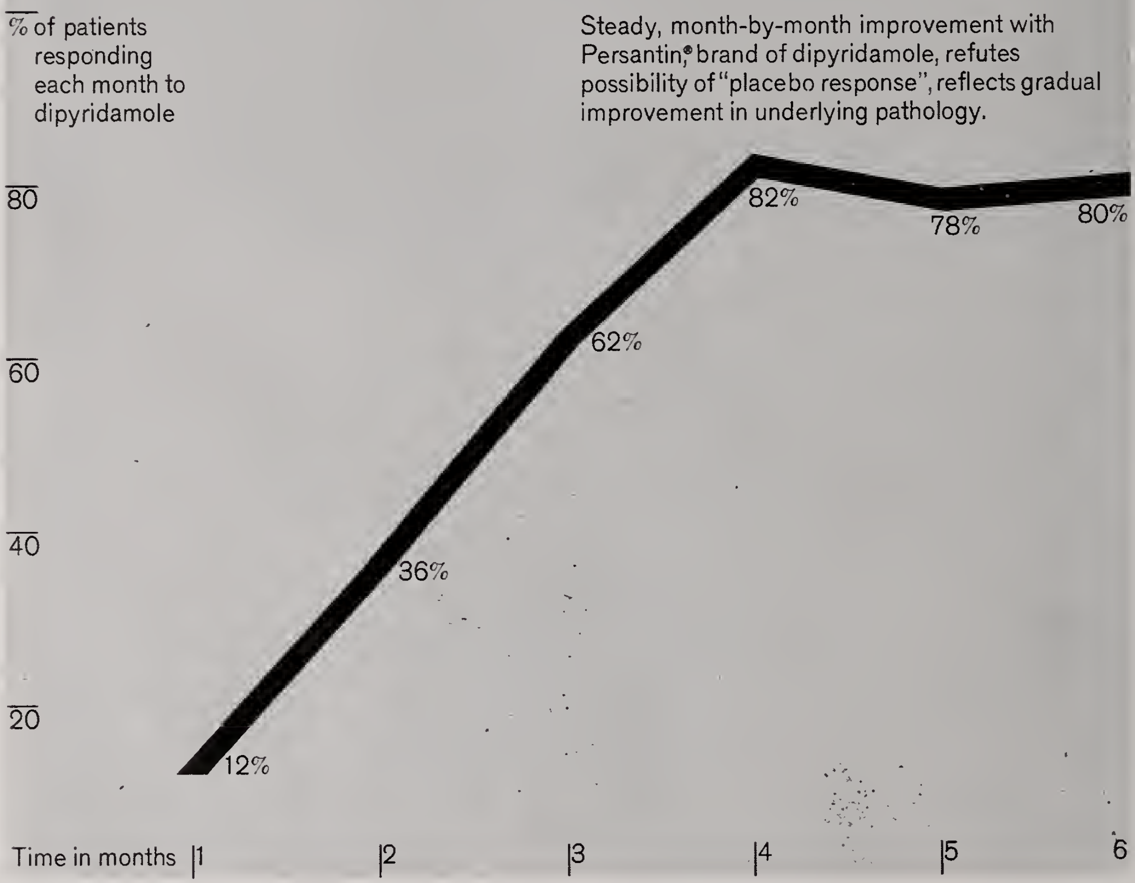
Study 1.
Griep,A.H.: Long-term Therapy of Ischemic Heart Disease With Oral Dipyridamole: A Report of Fifty Cases. Angiology 14:484, 1963.

Persantin® brand of dipyridamole, 25 mg. t.i.d. or q.i.d., was administered continuously for 6 months to 50 patients with well authenticated ischemic heart disease with angina pectoris and ECG abnormalities. Results were evaluated on a monthly basis.

Persantin® brand of dipyridamole

"...long-term oral therapy with dipyridamole was of benefit in 80 per cent of the patients...

"relief [of angina] came slowly and was usually maximal after three to six months of continuous treatment"



Steady, month-by-month improvement with Persantin® brand of dipyridamole, refutes possibility of "placebo response", reflects gradual improvement in underlying pathology.

Study 2.
Wirecki,M.: Dipyridamole (Persantin®): Evaluation of Long-Term Therapy in Angina Pectoris. Current Therapeutic Research 5:472, 1963.

In 40 ambulatory patients with myocardial ischemia, angina pectoris, and abnormal ECG findings, Persantin® brand of dipyridamole, 25 mg. t.i.d., was administered continuously for 3 months.

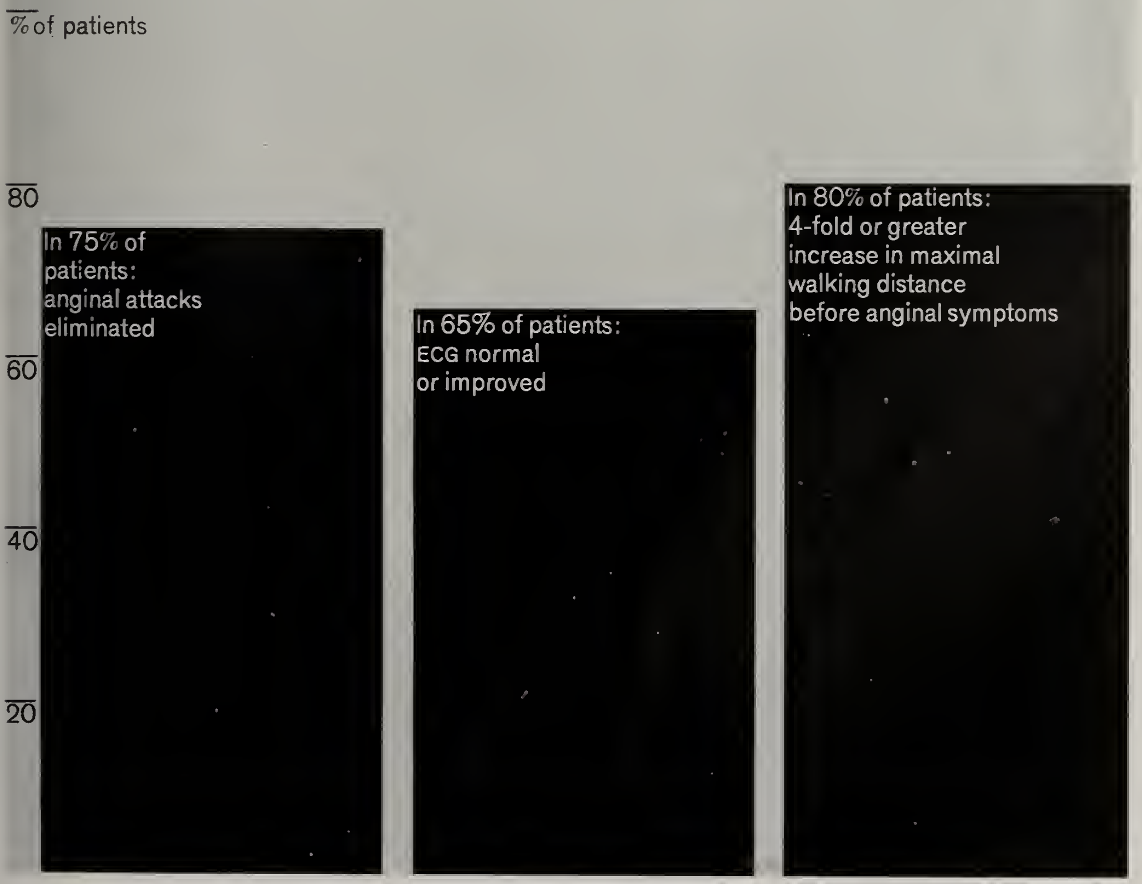
Geigy

After 3 months, 32 of 40 patients showed:

“...reduction or abolition of acute anginal attacks...

“complete or almost complete disappearance of ECG abnormalities...

“marked increase” in walking distance without anginal symptoms



Persantin® brand of dipyridamole

How long-term therapy provides clinical benefits reported on previous pages

1. By increasing energy yield
of the hypoxic myocardial cell, by direct action upon the sarcosomes (heart mitochondria).[1-5]

2. By improving collateral coronary circulation.
Prolonged oral administration of dipyridamole to animals with experimentally induced stenosis of a major coronary artery resulted in superior development of collateral coronary anastomoses and longer survival compared with controls.[6-9]

When given for prolonged periods and in adequate dosage, dipyridamole improves the coronary flow deficit of the ischemic myocardium while supporting cardiac metabolism during the period of repair. Clinically, this is manifested as steady improvement – anginal attacks diminish in frequency and intensity, as do other manifestations of insufficiency (dyspnea, fatigue, and, in many instances, abnormal electrocardiographic findings).

Availability:
Tablets of 25 mg., bottles of 100 and 1000.
Under license from Boehringer Ingelheim G.m.b.H.

Prescribing summary: Persantin,® brand of dipyridamole, is indicated in coronary and myocardial insufficiency, in a dosage of 2 to 6 tablets daily in divided doses before meals for several weeks. Side effects (headache, dizziness, nausea, flushing, weakness, syncope, mild gastrointestinal distress) are minimal and transient. The drug is not recommended in the acute phase of myocardial infarction, and should be used cautiously in hypotension.

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BOOK REVIEWS

Crossen's Synopsis of Gynecology, 6th ed. Daniel Winston Beacham, M.D., and Woodard Davis Beacham, M.D. Price, $7.50. Pp. 371, with 106 figures, including 3 in color. St. Louis: Mosby, 1963.

This compact little book on gynecology has been a "must" for the intern, resident, and the specialist since its first edition in 1932.

The format of the book, for easy reading and quick reference, has changed little; but much has been added to bring the volume up-to-date and abreast of the progress in gynecologic medicine and surgery.

Several color illustrations have been added which make the book quite appealing.

Chapters and information have been added on chemotherapy of cancer, the use of progestins in functional uterine bleeding, chromosomal counting, and biochemistry of ovarian steroids. There is even a mention of the use of Flagyl in treatment of trichomonas vaginitis, which indicates how current the volume has been made.

I would recommend the book highly as being an excellent, accurate, quick reference on almost all of the usually encountered gynecologic problems.

Charles I. Warfield, M.D.

Cecil-Loeb Textbook of Medicine, 11th ed. Edited by Paul B. Beeson, M.D., Walsh McDermott, M.D., and 5 Associate Editors. Price, single volume, $19.50; $23.50, 2-volume set. Pp. 1835, illustrated. Philadelphia: Saunders, 1963.

The eleventh edition of this textbook, under new editorial direction, has continued the plan of organization used previously. The major divisions are introduced by a section which in some instances serves to summarize the recent advances in the field and current investigational approaches and viewpoints; in other sections the introduction is really a short treatise on the pathophysiology of the organ system concerned. These introductory sections are of value not only for the student making his first attempt to understand disease mechanisms, but also for the physician utilizing the text as an initial reference for a disease entity with which he is not fully conversant. The sections dealing with specific diseases are contributed by authorities in each field. Although the table of contents has changed relatively little from the previous edition, many of the authors are new. The major changes in presentation are to be found in the sections on Diseases of the Blood and Diseases of the Digestive System. Both have been improved as well as expanded.

The new edition has maintained the comprehensive coverage which has previously established it as an outstanding textbook of medicine. Material is lucidly presented and the organizational division has not prevented textual integration of diseases which are not strictly confined to one organ system. This textbook is highly recommended as a basic reference work for the physician's shelf.

Gilbert M. Eisner, M.D.

Human Aging, a Biological and Behavioral Study. Edited by James E. Birren, Ph.D., Robert N. Butler, M.D., Samuel W. Greenhouse, Ph.D., Louis Sokoloff, M.D., and Marian R. Yarrow, Ph.D. (with the early editorial collaboration of Seymour Perlin, M.D.). PHS Publication No. 986. Price, $3.00. Pp. 328. Washington 25, D.C.: Superintendent of Documents, U. S. Government Printing Office, 1963.

This is a most excellent introduction to the study of the physical aspects of aging. A group of scientists connected with the Public Health Service conducted a series of studies of the problems involved in human aging. They selected 47 retired men, 65 years or older, and divided them into 2 groups: (1) optimally healthy men, and (2) those with mild, asymptomatic diseases. The subjects in Group I generally lived longer. Comprehensive medical studies of the groups in comparison with healthy young control subjects revealed few age-specific differences in quantitative variables. They found 1 notable exception in the decreased serum albumin with advancing age.

A closer study of personal habits and hobbies of the subjects may show more clearly that some of the familiar attributes of aging are mental, personally contributed and encouraged by his associates, even members of his own family. Subject "A" of Class II broke his leg playing football at college. It was properly repaired and gave him no concern. Now that he has retired, however, he recalls it and has taken to carrying a cane, which arouses the curiosity of his friends. He has told the explanatory story so often that now he feels he cannot go without the cane. Even members of his family think he should not go without the cane because he is getting old. Not a few imaginary defects are magnified by their possessors.

A similar study of females should prove equally interesting.

The book is a fascinating challenge to further study in aging.

Joseph S. Lawrence, M.D.

Medical Department, United States Army: Preventive Medicine in World War II. Communicable Diseases. Volume VI: Malaria. Colonel John Boyd Coates, Jr., M.C., Editor-in-Chief; Ebbe Curtis Hoff, Ph.D., M.D., Editor for Preventive Medicine, and Phebe M. Hoff, M.A., Assistant Editor. Prepared and published under the direction of Lieutenant General Leonard D. Heaton, The Surgeon General, United States Army. Price, $6.25. Pp. 642, illustrated. Washington 25, D. C.: Superintendent of Documents, U. S. Government Printing Office, 1963.

This is one of several volumes comprising the official history of the Medical Department of the U. S. Army in World War II, prepared by The Historical Unit, United States Army Medical Service.

(Continued on page 28)

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Editor and Major Contributor, CHARLES WESLEY SHILLING, M.D., D.Sc., Consultant to the United States Atomic Energy Commission; Deputy Director, Division of Biology and Medicine, USAEC, 1955-60. With the Assistance of MIRIAM TEED SHILLING, M.A. Prepared under the auspices of the Division of Technical Information, USAEC. 474 pages, 7¼" x 10¼", with 268 illustrations, 98 tables. About $10.50. *New—Ready January!*

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Book Reviews

(*Continued from page 26*)

The volume documents the preventive medicine survey and control efforts which were undertaken in malariology, both in the United States and the very numerous overseas theaters, during the period in which the United States was engaged in war against the Axis Powers. The physiography, climate, native populations, habits, and distribution of the mosquito vectors of the many areas of the world in which there is a prevalence of malaria are discussed in this interesting volume. The details recorded will certainly be of inestimable value to the civilian and Army public health workers who are now serving on overseas assignments.

S. Ross Taggart, M.D.

Clinical Examinations in Neurology, 2nd ed. Members of the Sections of Neurology and Section of Physiology, Mayo Clinic and Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, Rochester, Minnesota. Price, $8.50. Pp. 396, illustrated. Philadelphia: Saunders, 1963.

Reviewing this book is like meeting an old friend under new circumstances. Anyone in the field of neurology, I think, is well familiar with this book and has used it many times along with other standards in the field as a guide to refreshing his memory on previously learned experiences.

The present edition is definitely more complete than the previous edition. There have been many additions to each chapter in the sense that some of the reasons behind the tests are now given along with some of the background information. The lack in the first edition of any X-ray studies and a pediatric section has been overcome, to the gratification of this reviewer. In both sections the material is concise and to the point and serves strictly as a short review or outline. The excellent diagrams throughout afford a complete but short review of clinical neuroanatomy.

The index is adequate. Important in many ways is that all explanations are concise.

The author's intent is obvious—to leave out any material which would be questionable. However, the new techniques of brain-scan, radioisotopes, and the use of angiography to ascertain extracerebral vascular disease are not mentioned in the book. I think this is a lack but certainly a minor fault.

Basically this book is to the point and I strongly recommend it for the use of any practitioner in neurologic sciences. Especially is it valuable to those of us who are in any way in a teaching capacity. It also offers concise explanations, both anatomically and physiologically, of the reasoning behind many of the tests we are using today.

Francis C. Mayle, Jr., M.D.

W. B. SAUNDERS COMPANY features the following new books in their full-page advertisement appearing elsewhere in this issue:

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Synopsis of Ear, Nose, and Throat Diseases, 2nd ed. Robert E. Ryan, B.S., M.D., M.S. (ALR), F.A.C.S., William C. Thornell, A.B., B.M., M.D., M.S. (ALR), F.A.C.S., and Hans von Leden, M.D., F.A.C.S., F.I.C.S. Price, $7.50. Pp. 425, illustrated. St. Louis: Mosby, 1963.

To quote from the preface, "This book was written to serve as a handy guide for the busy family physician, the intern, and the medical student," and it serves this purpose admirably. The book is of a convenient size and can be carried easily in the pocket of a house officer's jacket so that it will be readily available when a problem in otolaryngology arises. Another important feature is a very comprehensive index, without which the value of any book of this type is greatly reduced.

The material has been divided into 4 large groups, the ears, the nose and paranasal sinuses, the pharynx, and the larynx. These large subject headings are divided into chapters which deal with various phases of each heading, such as Applied Anatomy, Physiology, Method of Examination, as well as specific disease entities, such as otitis media, tonsillitis, etc. Where appropriate each chapter is summarized at the end in outline form, and this outline gives at a glance the essentials of diagnosis and treatment of the condition described. The outline itself of the chapter on Headache is 4 pages long, which gives an idea of the comprehensiveness of the book.

The chapters on Deafness and Hearing Evaluation simplify these complicated subjects. With recent advances in surgery of the ear, the chapter on Microsurgery of the Ear is helpful in describing present methods of surgery for deafness without going into great detail on the surgical techniques involved.

This second edition is a worthy successor to the first edition, and it succeeds well in bringing the subject up-to-date.

Morris E. Krucoff, M.D.

NEW AND FORTHCOMING BOOKS

A SYSTEM OF ORTHOPAEDICS & FRACTURES by **Dr. A. Graham Apley,** *Consultant Orthopedic Surgeon, the Rowley Bristow Orthopedic Hospital, Pyrford, England; Surgeon in Charge of the Accident and Emergency Center, St. Peter's Hospital, Chertsey, England.*

For this second edition of this work, the entire text has been revised and rewritten, incorporating those recent developments which are destined to play a major role in future practice. Each section is again planned under a uniform pattern of headings, and a new chapter on the management of major accidents describes the structure, organization and staffing of accident centers, as well as the management of the patient with multiple injuries not necessarily confined to the skeletal system.

Published by Butterworth, Inc. *402 pages* **$13.00**

BLOOD DISEASES by **M. A. Atamer, M.D.,** *Director, Section of Hematology, Department of Medicine, Grasslands Hospital, Valhalla, New York.*

This book presents clinical hematology in a concise form and is essentially intended to be an exposition of the clinical aspects of hematology rather than a textbook embodying all facets of the discipline. Here is a book which serves three needs: as a basic and authoritative introduction, a concise and systematic refresher, and a constantly dependable reference.

Published by Grune & Stratton *624 pages* **$16.50**

DYNAMIC ANATOMY AND PHYSIOLOGY by **L. L. Langley, Ph.D., LL.B.,** *Professor of Physiology, University of Alabama Medical Center;* **E. Cheraskin, M.D., D.M.D.,** *Professor and Chairman of the Section on Oral Medicine, University of Alabama Medical Center;* and **Ruth Sleeper, R.N., M.A.,** *Director of the School of Nursing, Massachusetts General Hospital.*

In this revised, up-to-date edition every effort has been made to achieve a better balance between the anatomy and physiology content. The emphasis is on function. With this second edition the authors have added a glossary, expanded the situation-type questions at the end of each chapter, and have included tables on muscles, arteries, veins and nerves.

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MORPHOMETRY OF THE HUMAN LUNG by **Ewald R. Weibel, M.D.,** *Research Associate, Department of Cytology, the Rockefeller Institute, New York, N. Y.*

The work presented in this monograph marks a new era both in the development of quantative anatomy of the lung, and in the correlation of anatomy with physiology. The great advances in the study of pulmonary anatomy in the past decade have been chiefly in the realm of "fine structures." This has tended to bring together anatomy and biochemistry rather than anatomy and physiology. This monograph will set forth an entirely new methodology for quantitive description of this complex organ.

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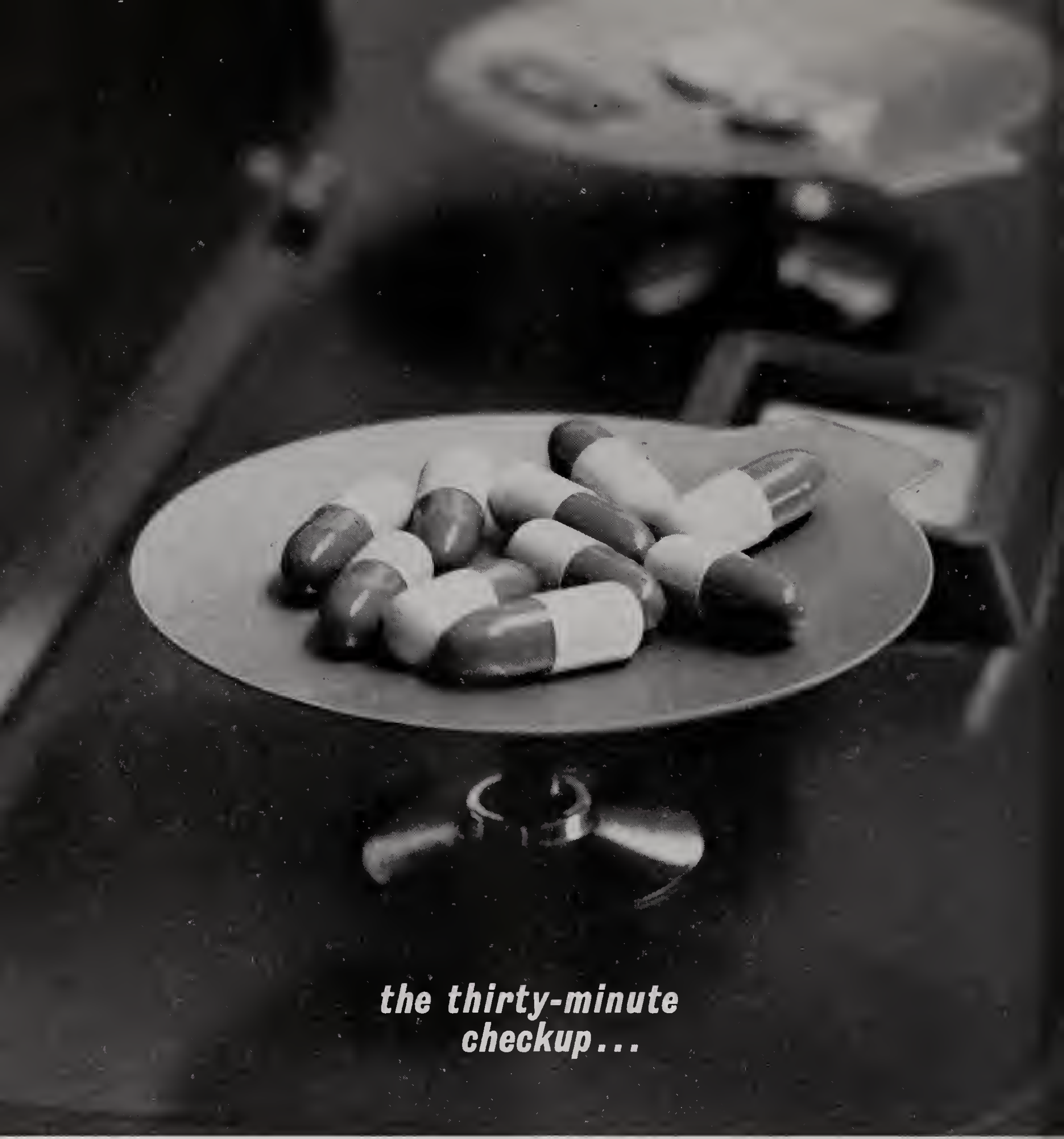

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A Review of Medicolegal Problems of Anesthesiology*

PAULA R. KAISER, M.D.

Assistant Professor of Anesthesiology, George Washington University School of Medicine

THIS PAPER will, for the most part, reflect the opinions of others more qualified in the field of forensic medicine than I, such as Regan.[1] My opinions are the result of reading and discussions with lawyers of my acquaintance. For the sake of brevity I shall emphasize those aspects of the law with which anesthesiologists are most concerned.

For many years anesthetics were administered by nurse-technicians and occasionally by physicians who were often untrained. It was customary, therefore, for them to be completely under the orders and supervision of the surgeons who were legally liable for the anesthetists' acts of commission or omission. The picture has been changing over the past several decades. Intensified efforts have been made by physicians interested in this branch of medicine to change the anesthetist from a technician to a specialist. With that recognition has come legal responsibility. It has become necessary to learn something of this responsibility so that we may understand and perhaps prevent the causes of lawsuits.

While truths about science and medicine are, by definition, universal, truths about legal duties and responsibilities are artificially limited to the artificial geographic boundaries of sovereignties. With the 50 states and the Federal Government, there are 51 different sets of laws that govern American doctors.

I shall try to present the views of the majority on the subjects discussed, but the locality where one happens to be working at a given time may enforce a different rule.

Problems of Legal Consent

One of the basic actions in common law is trespass to the person, more commonly known as battery. Battery is the intentional touching of one person by another without consent. Since, of course, every anesthetic, like every surgical operation, involves touching a patient, the critical legal question is that of consent. To be proper, consent must be given by a person capable in law of doing so. Legal capacity to give consent depends in the main on 2 factors—age and the condition of the patient's mind. Where, because of either of these factors, the patient himself is incapable, consent must be obtained from some other appropriate person such as the parent or guardian of a minor, or the spouse of an adult.

Generally the law arbitrarily holds that a minor (a person under 21 years of age) cannot give consent because he does not know the nature, purpose, or risk of the procedure involved. Some jurisdictions, however, recognize an emancipated minor as an exception. If, for example, a young man under 21 marries and establishes and supports his own home, he is said to have the capacity to consent to surgical operations upon himself and his family.

The law also does not recognize a consent given by a number of adults who do not understand the nature, purpose, or risk of the procedure involved. This group includes mentally unsound patients and those under the influence of alcohol or drugs. Because of the effect of drugs on the validity of consent, it is important that consent be obtained before the preoperative medication has been administered. But not even the consent obtained from a sane, sober and conscious adult will always suffice as a defense in battery. In recent years a number of lawsuits have succeeded in the face of such consent because they did not in fact reflect a knowledge of the nature, purpose, or risk involved. This has come to be known as the Doctrine of Informed Consent, which I emphasize not only because of its growing importance in lawsuits affecting anesthesiologists, but also because it, like some other legal doctrines, has become a subject of inquiry at Board examinations.

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* Presented before the Department of Anesthesiology of George Washington University Hospital in Washington, D.C., May 28, 1963.

In the preoperative visit the anesthesiologist should explain fully the anesthetic he is planning. He should not use subterfuge in his explanation since consent secured by a misrepresentation of facts is not valid. The case of Natanson vs. Kline (Kansas, 4-9-60) held the defendant radiologist liable for failure to obtain an informed consent because he had not advised the patient of the dangers of a new treatment (cobalt). The court acknowledged that there is a privilege based on therapeutic grounds to withhold specific information that would jeopardize the recovery of an unstable person but added that in the ordinary case there is no warrant to suppress facts relating to treatment.

In the case of Mitchell vs. Robinson (Missouri, 4-60) a patient who had consented to electric shock therapy and insulin therapy suffered fractures of C-5, 6 and 7. The patient brought suit to recover damages for these injuries. He denied that the doctors had informed him of the possible injuries he might sustain, adding that he would not have consented to the treatment had he known. The court held the physician liable even though he may have followed approved standards of care in his treatment.

Assuming that a proper consent has been obtained from a capable patient, parent, spouse or guardian, it is extremely important that one is in a position to prove it. The most obvious and complete proof would be a signed consent. Here at George Washington University Hospital, as in many other hospitals, there is a printed consent form which is signed and witnessed. Such consent is known in law as express consent. It is the most complete proof of consent but by no means the only legally adequate consent. Indeed, no less sufficient in law is oral consent, also known as a form of express consent. By 'no less sufficient in law' I mean that if one proves to the judge and jury that the patient agreed orally, one's legal defense is no less complete than would be a written consent. When one is obtaining oral consent as, for example, over the phone in the case of emergency surgery on a minor, it would be best to have a witness to the conversation.

Express consent, which, as indicated, can be either written or oral, simply means that the patient or his authorized spokesman has explicitly agreed to the procedure, but the law also recognizes a consent that is not explicitly articulated. This is known as implied consent, that is, a consent that can be implied, inferred, or presumed from all the surrounding circumstances. The following illustrations will show the applicability of the doctrine of implied consent.

A surgeon may have a general consent for a laparotomy without having specific consent for that which he may decide needs to be done after he has discovered the diseased organ. In some "strict jurisdictions" the courts may limit surgical endeavors to those to which the patient has specifically consented. Such was the case of Mohr vs. Williams. The patient entered the hospital for surgery on his right ear. While he was under general anesthesia the surgeon discovered that the left ear was involved to a greater degree than the right. After consultation with the patient's family physician, who was in the operating room, the surgeon proceeded to operate on the left ear. The surgeon was sued successfully; the court decided the surgeon had exceeded his consent. A possible explanation for this extremely harsh and quite unusual ruling was the probable feeling of the court that the surgeon was negligent in not discovering the more diseased ear in his preoperative examination.

Perhaps the most difficult problems confronting our profession with respect to the defense of consent stem from emergency surgery situations in which consent is a physical impossibility because the patient is unconscious and his identity or relatives are unknown to the physician. This situation brings into play a conflict of public policy. On the one hand, public policy condemns a battery without consent; on the other hand, it demands that our profession serve the needy even when consent is unavailable. The law generally and, I might add, correctly recognizes the latter policy as the more important one. The courts and textbook writers have treated emergency situations as coming within the doctrine of implied consent, reasoning that the patient would have consented were he able to do so.

The problems presented by Jehovah's Witnesses may cause us some concern. This group of people, because of their religious beliefs, rarely consent to blood transfusions on themselves or their families. With respect to adult members of that sect who refuse such consent the surgeon must elect to withdraw from the case or take the risk of proceeding without the consent. However, if the physician thinks that a child of a Jehovah's Witness would seriously suffer without a blood transfusion as, for example, in the case of an erythroblastotic baby, he may appeal to the local court to name itself guardian for the duration of the medical emergency and grant the consent.[2]

Definition of Malpractice

A malpractice case is one in which a patient who is injured as a direct result of negligent treatment or advice of a physician seeks damages. In all such cases, except those in which *res ipsa loquitur* applies, it is incumbent on the plaintiff to plead and prove 4 elements: (1) duty of care, (2) breach of duty of care, (3) direct causation, and (4) injury. Duty is established by simply showing the existence of the physician-patient relationship. Duty of care is measured by the so-called 'reasonable, prudent man' doctrine, substituting the word physician for man. The law requires a physician to exercise the degree of care that a reasonable, prudent physician in his community would exercise. A specialist would be required to meet the standards of care of his specialty. These are usually established by expert testimony. Breach of the duty of care is also established by expert testimony. There must also be proof of a direct chain of causation from the wrongful act or omission of the physician to the injury suffered by the patient. Finally, the patient must prove the fact of injury. Injury includes pain and suffering, loss of a bodily member or faculty, disfigurement, and other physical damage as well as specific monetary losses, such as the loss of earnings, the cost of medical and hospital care, travel, etc.

Lawsuits of Frequent Incidence

A recent study shows the frequency with which anesthesiologists have been involved in lawsuits. Don Harper Mills (M.D., LL.B.)[3] of Los Angeles, reporting in *The Journal of the American Medical Association*, March 30, 1963, states that, of 1,000 malpractice cases during the years from 1958 to 1962, 71 involved anesthesia. Of these cases, 18 were cardiac arrests. Thirteen of these occurred under general anesthesia and were considered to be due to unrecognized inadequacy in ventilation. Three occurred during spinal anesthesia and followed hypotension and respiratory depression. Two of these cardiac arrests resulted from reactions to local anesthesia and were considered to be due to toxic reactions rather than to idiosyncrasy of the drugs. In 1 case the reliability of closed chest massage in the hands of an untrained doctor was stressed. The 4-minute rule was questioned in another case in which resuscitation within 4 minutes nevertheless resulted in cerebral damage. However, in both of these cases it appeared that there had been pre-arrest hypoxia which, with the anoxia of cardiac arrest, may have had a cumulative effect on the nervous system. Twenty-five cases involved peripheral nerve injuries. In 18 of these 25 cases injury to peripheral nerves occurred during spinal anesthesia. Three injuries to peroneal nerves occurred in patients whose legs had been placed in stirrups. In 4 epidural cases inadvertent dural puncture was found to produce nerve damage. In only 1 of these cases did a massive spinal anesthesia result.

Cardiac arrest. An article in *Medical Economics* (May 6, 1963) on "Cardiac Arrest"[4] will no doubt stir up anesthesiologists. It reports the case of a young housewife who entered a hospital in Florida for a hysterectomy. The surgeon noted a cardiac arrest because the incision was not bleeding. He ordered intravenous epinephrine followed by intracardiac epinephrine, and then sent for another surgeon to do a thoracotomy and cardiac massage. The patient was resuscitated but suffered permanent brain damage. A suit in malpractice against the surgeon was successful on the grounds that he should have been able to perform the thoracotomy himself. Damages of $78,500 were awarded. Significantly, the anesthesiologist was not held liable by the court.

In another case a patient entered the hospital for a tonsillectomy. The patient had warned the surgeon of previous anesthetic difficulty in which an operation was cancelled because he had stopped breathing. Immediately after the anesthetic was started for the tonsillectomy the patient went into cardiac arrest. Although he was revived he suffered permanent brain damage. The surgeon was sued. The court chastised him for failing to inform the anesthesiologist or note the history of the previous difficulty on the patient's record. The surgeon argued that he did not consider the history of previous difficulty important in view of modern advances in anesthesiology. The patient was awarded damages, thus again emphasizing the need for a careful history.

Endotracheal anesthesia. The literature is replete with lawsuits involving endotracheal anesthesia. Injury to teeth during laryngoscopy is a common complication of intubation and has been the subject of many suits. The law here demands that reasonable care include: (1) examination of the teeth preoperatively, (2) removal of loose teeth and partial dentures, (3) protection of the teeth during intubation, and (4) recovery of the teeth if accidentally damaged.

Two cases illustrate proper and improper management of this problem. A physician anesthesiologist dislodged an upper incisor. Immediately on discovering the accident before surgery was started he ordered a roentgenogram of the chest. The tooth was located in the right main stem bronchus and was retrieved by a bronchoscopist who damaged another tooth. A suit for negligence was brought against the anesthesiologist and the bronchoscopist, who were held not liable since they had exercised reasonable care.

In the second case an anesthesiologist broke several prosthetic incisors with the laryngoscope. When their absence was noted 1 tooth was recovered but no X-ray film was ordered. Even though a cough developed postoperatively no X-ray film was ordered until several weeks later. The tooth was then found in the right lung and recovered. The trial court held the hospital, the surgeon, and the anesthesiologist liable. The state Supreme Court reviewed the decision and held that only the anesthesiologist was liable.

Blood transfusions. Blood transfusions, too, have been the basis of lawsuits. The anesthesiologist is responsible for the administration of blood during surgery. He is liable for malpractice if incorrect blood is administered, but he is not held responsible for improper matching of blood when, as is usual, he is not in charge of the blood bank.

Other injuries. Other types of injury which have been the subject of litigation against the anesthesiologist are: (1) dermatitis and burns from face masks soaked in antiseptics, (2) injuries to the eyes from pressure or foreign substances, (3) hematomas at the angle of the jaws and facial palsy due to excessive manual pressure by the anesthetist, (4) injury to the brachial plexus from improper positioning of the arm during general anesthesia, (5) tissue damage resulting from extravasation of Pentothal®, (6) explosions resulting from lack of proper precautions, (7) cold sterilization of anesthetic drugs for local use, (8) burns occurring during general anesthesia from chemicals in the antiseptic solutions, from ice bags or hot water bottles, (9) phlebothrombosis of veins from irritating solutions, (10) injury during transportation of a patient, and (11) injury from improper positioning on the operating table. This list is by no means complete. It may be fairly said that every complication involved in the practice of our specialty has been the subject of a lawsuit.

Res Ipsa Loquitur

I come now to a discussion of the legal doctrine known as *res ipsa loquitur*, which is becoming increasingly more important because of its practical consequences in recent litigations.[5] As I have previously stated, in the trial of medical malpractice cases proof of a physician's negligence is normally established by testimony of medical expert witnesses. *Res ipsa loquitur* is becoming an exception to that rule.

Literally translated, it means the thing speaks for itself. It is a doctrine applied in all negligence trials when 3 conditions exist. These are: (1) the accident or injury involved must be one which does not ordinarily occur if proper care is used; (2) the plaintiff has not by his negligence contributed to the injury; and (3) the action causing the injury must have been within the exclusive control or knowledge of the defendant or his agent; that is, the plaintiff has no way of knowing how his injury was caused. When these 3 factors occur the law creates a presumption of negligence on the part of the defendant which he must overcome by demonstrating that he exercised reasonable care.

Since surgical patients are almost always unconscious or otherwise physically incapable of knowing what transpired during anesthesia, the requirement that the defendant surgeon or anesthesiologist go forward with proof of his conduct seems justified. Originally those courts that permitted *res ipsa* in malpractice cases limited its effect to that relatively simple requirement; after the defendant physician described his conduct it still remained the patient's obligation to prove by expert testimony that the defendant's professional conduct did not meet the required standard of skill and care. Recently, however, and with increasing frequency, courts have relieved the patient from that obligation and have sustained heavy damage awards on the mere presumption of negligence, unsupported by expert testimony on behalf of the patient and contradicted by expert testimony on behalf of the physician.

Thus, an untutored jury may lawfully substitute its ignorance or prejudice for expert guidance in inflicting huge penalties on innocent practitioners. The obvious mischief of this recent development need not be elaborated. It virtually converts every unusual injury occurring during surgery into a potentially successful lawsuit, no matter how skillful and prudent the performance of the doctors. In our own field it has already sharply reduced the use of spinal anesthesia because of the successful lawsuits that have been brought in some states.

The California Supreme Court, for example, held for the plaintiff in a case based on complications following spinal anesthesia. It applied *res ipsa* simply because of testimony that the injuries were not such as usually occur without negligence. There was no medical testimony that the specific conduct of the defendant physician was below the profession's standards in that community.

In contrast, in a case in Ohio the court did not apply the doctrine in a case in which the spinal needle broke during the administration of a spinal anesthetic. The court held that negligence could not be inferred but must be proven because there may be other reasons for a needle breaking, such as a defect in the needle of which the physician cannot be aware or to an involuntary movement of a nervous patient.

Unfortunately, doctors are not entirely without blame for this "harsh" and unrealistic application of the doctrine of *res ipsa loquitur*. It stems in part from the growing annoyance of the general community and courts by what has been called the "conspiracy of silence" among physicians (the reluctance and refusal of doctors to appear as plaintiffs' witnesses and to publicly criticize their colleagues). To meet the problem of mushrooming lawsuits remedies have been devised, and these, doubtless, will increase.

Panels of Experts

In California there are now panels of experts which furnish medical testimony. In Pina, Arizona, they have a Pina Plan. When a physician is sued in malpractice he must bring his case before a medical panel. If he was negligent he is told to settle; if not negligent, he is advised to fight the case. In Cleveland, Ohio, there are also panels of experts, but they may be utilized only with the permission of the plaintiff and defendant; and if the case comes to trial it is not permissible to take any of the pretrial testimony into court. In the District of Columbia there is a committee of the Medical Society which makes itself available to the insurance carrier. This committee meets informally with the physician and advises whether to fight the case or to settle. The hearing is oral and nothing which takes place can be used elsewhere. The procedure is voluntary.

Legal Responsibility of the Physician

In addition to responsibility for his own acts the physician may be held liable for the acts of others. In a partnership each doctor can be held liable for his partner's acts as well as his own and also for the acts of any agent or employee of the partnership. If 2 independent practitioners are treating the same patient each is liable for his own acts and for failure to take affirmative action to prevent the negligent acts of the other which he has observed, or which in the exercise of ordinary diligence he should have observed.

The attending physician is generally not held liable for the acts of hospital personnel such as interns, nurses, and other hospital employees unless such personnel are functioning under his immediate supervision and control. Operating-room personnel, such as nurses, nurse anesthetists, and residents, are classified as servants in the modern application of the master-servant relationship under the common law. Since the hospital usually hires, fires and pays such personnel, it is regarded as master and is responsible for the torts of its servants. The doctrine of *respondeat superior* (let the master respond) is applied when the servant commits a negligent act.

However, in most jurisdictions it is recognized that the hospital corporation cannot enter operating rooms. In the operating room, therefore, these employees become the servants of the surgeon under the 'borrowed servant' doctrine. In the operating room the surgeon is regarded as the 'captain of the ship.' When the operating-room door closes everyone in it becomes his agent.

This was true until the anesthesiologist entered the door, and for the first time created a situation of divided responsibility, in effect, co-captains. The surgeon is in complete charge below the screen and the anesthesiologist's domain is above the screen. While the code of ethics of the medical profession expects them to share responsibility, the law holds each to a separate accounting.

Conclusions

Our chief concern with the subject of today's discussion is to ascertain how we can avoid litigation. Dripps[6] and other students of this subject feel strongly that a disappointed, angry patient is the one most likely to file a suit. This feeling may be caused by the physician's failure to establish rapport with his patient. Occasionally a third person, frequently a physician, instills the distrust in a patient by criticizing the work of another physician, directly or by implication.

It is important to be sure the patient realizes that all treatment cannot achieve perfect results. One should also avoid making remarks to the patient or his relatives or friends which can be construed by a jury at some later date as being an 'admission of guilt.' Anesthesiologists are in a difficult situation. They have a captive practice. Establishing rapport with their patients is, therefore, extremely difficult but no less important.

I should like to summarize some of the advice that the experts have offered us over the years: (1) First and foremost, practice good medicine; (2) be able to defend your actions by proof of what you have done; (3) avoid careless criticism of another physician; (4) have a preoperative consultation with your patient; (5) keep good anesthesia records; (6) avoid guaranteeing good results; (7) secure written consent as often as possible; (8) check your equipment frequently and make use of every available safety device; and (9) if you are advised of even a possibility of a suit, notify your insurance carrier or consult a lawyer.

No matter how scrupulous and careful you are about following these and other precautions in your practice it would be extremely unwise to practice without having adequate malpractice insurance. Experience, not cynicism, teaches that this indeed is the most important safeguard of all.

ADDENDUM: Since the completion of this paper an epoch-making decision has been made in our local courts. On September 17 of this year, Judge J. Skelly Wright of the United States Court of Appeals of the District of Columbia issued an order requiring a blood transfusion for a 22-year-old woman who was a Jehovah's Witness. She and her husband had refused a blood transfusion because of religious convictions. No legal precedent existed requiring that a blood transfusion be given to an adult.

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Unsupervised Early Feeding of Solids to Infants

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MEDICAL THEORY AND PRACTICE regarding the introduction of solid foods to infant diets have undergone considerable change during this century. At the beginning of the century the introduction of vegetables was usually recommended at 3 years of age.[1] Twenty years later solid foods were seldom recommended before 1 year of age.[2] Currently the age most frequently recommended for the introduction of solids appears to be about 3 to 4 months.[2, 3, 4] A 1954 survey of 2,000 pediatricians revealed that 66 per cent routinely advised the introduction of solids before 8 weeks of age and that 88 per cent routinely advised the addition of solids before 3 months of age.[5]

In the Child Health Clinics of the District of Columbia Department of Public Health the introduction of solids in infant diets is usually recommended at 3 months of age. It has been found, however, that many of the infants seen at these clinics are already taking solid foods prior to their first clinic visit. This study was undertaken to determine the prevalence of this practice and the possible reasons for it.

Material and Methods

The study population consists of infants under 6 months of age making their first visit to a child health clinic at which one of the authors (R.P.E.) was the physician. The infants were selected in consecutive order until the total of 500 was reached.

The mothers of these infants were all interviewed by the same physician. The information collected included the age and birth-weight of the infant, the number and ages of siblings, age of mother, educational level of the parents, source of infant-feeding advice, and types of solid foods included in the infant's diet.

The civilian hospitals in the District of Columbia which deliver staff patients were visited and the supervising nurse of the newborn nursery was interviewed. Information was collected on the routine instructions given mothers on discharge regarding infant feeding and continuing health supervision for the infant.

Findings

Prevalence of feeding solids. Of the 500 infants studied 12 (2 per cent) were under 1 month of age, 378 (76 per cent) were in the age range of 1 to 2 months, and 110 (22 per cent) were in the age range of 3 to 5 months (table 1).

TABLE 1: Incidence of Solid Feeding of Infants at Various Ages

Age in Months at First Clinic Visit	Total Infants	Infants on Dietary Solids		Infants Not on Dietary Solids	
		Number	Per cent	Number	Per cent
Under 1	12	8	66.7	4	33.3
1	226	187	82.7	39	17.3
2	152	146	96.1	6	3.9
3	65	65	100.0	—	0
4	27	26	96.3	1	3.7
5	18	18	100.0	—	0

Although the number of infants under 1 month of age is small it is of interest that 67 per cent were receiving solid food. The per cent receiving some solid food at 1 month was 83, at 2 months 96, and at 3 to 5 months practically 100 (table 1). A comparison of the 2 groups at various ages is illustrated in figure 1.

Of the infants receiving solid food (table 2) practically 100 per cent at each age level were on cereal. The percentage of infants receiving fruits was 25 in those under 1 month of age and increased progressively at each age level to 100 at 5 months of age. Vegetables were being taken by more than 10 per cent of the infants aged 1

TABLE 2: Types of Dietary Solids Taken by Infants at Time of First Clinic Visit

	Age in Months at First Clinic Visit											
	Under 1		1		2		3		4		5	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Total infants......	8	100.0	187	100.0	146	100.0	65	100.0	26	100.0	18	100.0
Types of dietary solids												
Cereal..........	8	100.0	186	99.5	144	98.6	64	98.5	25	96.2	18	100.0
Fruit...........	2	25	94	50.3	116	79.4	61	93.8	19	73.1	18	100.0
Vegetable.......	1	12.5	26	13.9	60	41.1	39	60.0	15	57.7	17	94.4
Meat............	1	12.5	3	1.6	17	11.6	18	27.7	11	42.3	11	61.1
Egg yolk........	—	0	—	0	6	4.1	2	3.1	3	11.5	5	27.8
Table food......	—	0	—	0	1	0.7	1	1.6	—	0	1	5.5

month or less and by 5 months of age by 94 per cent of the infants. Meat feeding occurred at the earliest age and reached an incidence of 61 per cent at 5 months of age (figures 2 and 3). The feeding of egg yolk did not occur until 2 months of age and reached an incidence of 28 per cent at 5 months of age. The feeding of table food was also found in occasional infants.

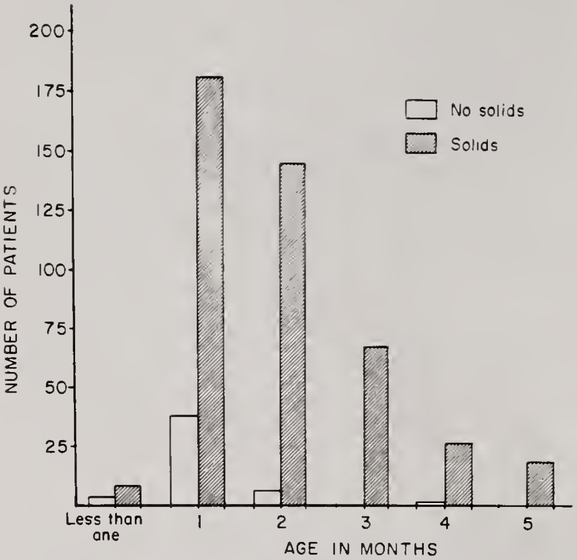

FIG. 1. Comparison of number of patients with and without solid foods in diets at various ages.

Prevalence of feeding solids in relation to other factors. There was no appreciable difference in the incidence of solid feeding between whites and nonwhites, infants in different birth-weight groups, different sibling orders in the family, different maternal age levels, and different maternal educational levels.

Source of advice on feeding solids. Direct query of the mothers regarding the source of advice on the introduction of solid food in the infant's diets yielded variable and scattered responses. Rarely did a mother report that such advice was received from a physician or nurse. Most responses indicated that such advice came from the grandmother, other relatives, neighbors, or friends, in that order of decreasing frequency. Not infrequently solid food was introduced without the benefit of outside advice.

To check further on the possibility of medical advice on solid feeding a survey was made of 9 civilian hospitals which delivered staff patients. At each hospital advice on infant care and feeding is given to the mother prior to discharge but in no instance is information given on the introduction of solid foods.

Of the approximately 10,000 newborn infants admitted each year to the Child Health Clinics some 6,500 are born at the municipal hospital (where admission is restricted for the most part to indigent and medically indigent patients) and are referred directly to the Child Health Clinics. The remaining 3,500 infants are born at the other hospitals and with the exception of 1 hospital are referred to the hospital's postpartum or well-baby clinic where advice on solid feeding may be given. At 4 of these hospitals the infants are followed at the hospital clinic for varying periods, and at 3 of the hospitals the infants are seen only once at the hospital clinic and are then referred to the Child Health Clinics. It would appear, then, that for the vast majority of infants on solid food seen for the first time in the Child Health Clinics the introduction of solid food was done without the benefit of medical advice.

Discussion

The findings of this study confirm the prevalence of early unsupervised feeding of solids to infants, even in a predominantly low-income population group. The prevalence of this practice appears to be independent of race, birth-weight, position in the family, maternal age, and maternal educational level, as reported in other studies.[6, 7, 8]

Several factors may be responsible for this practice. Information on infant-feeding is available in numerous lay publications,[9] but few of the mothers in our clinic population implicated this source of advice as the bases for their introduction of solids in infant diets. The ready availability of commercially prepared solid foods for infants is undoubtedly a contributory factor.[10]

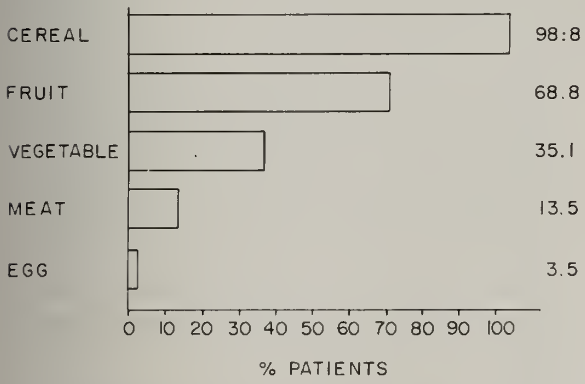

FIG. 2. Types of foods in diets of patients who were taking solids at their initial clinic visit.

More important, perhaps, is the factor of maternal competitiveness in infant feeding,[3] and we are impressed by the pride with which mothers described the quantity and variety of solid foods their infants were taking. The increased number of infants that first refuse solid foods when these are offered early[10] and the increased cost of infant-feeding due to the early introduction of solids[11, 12] are clearly not significant deterrents to the unsupervised early introduction of solids.

It would appear, therefore, that the trend toward unsupervised early feeding of solids to infants will continue unless there is concerted medical advice to the contrary at the time the mother is discharged from the hospital with her newborn infant. On the other hand, there is no established justification for such medical advice. It has been suggested that possible harm may result from substituting solid foods for milk-feeding that are inferior to milk in nutrient value.[1] It has also been suggested that the early addition of solid food may lead to overfeeding and predispose the overfed infant to obesity in adulthood.[13] The demonstration that atherosclerosis occurs in early childhood also merits consideration in evaluating early feeding practices.[14] Controlled long-term studies of infant-feeding practices[15] are needed to determine whether early feeding of solids has any detrimental effects in later life.

Summary

A study of the diets of 500 infants under 6 months of age upon making their first visit to a Health Department Child Health Clinic in the District of Columbia revealed a high incidence in all age levels of early feeding of solid foods. Most commonly found in the diets of these infants were cereal, fruit, vegetable, meat, and egg yolk in decreasing order of frequency. This unsupervised early feeding of solids appeared to be independent of race, birth-weight, sibling order, maternal age, and maternal educational level.

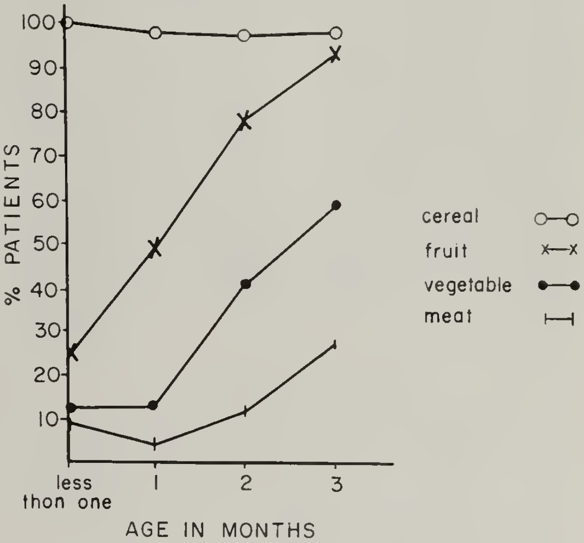

FIG. 3. Percentage of patients taking various solids by age in months.

The desirability of incorporating specific prohibitions against early feeding of solids in the routine instructions given mothers at the time of their discharge from the hospital with their infants has been discussed.

N. B. The authors with to express their appreciation to Dr. Samuel Shwartz for his assistance in the preparation of this manuscript, to Dr. Hillary E. C. Millar and to Mr. John H. Vinyard for their suggestions, and to Miss Margaret Jackson for her clerical assistance.

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Problem Weight Gain in "Wanted" versus "Unwanted" Pregnancies

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IN SOME WOMEN pregnancy brings on emotional stress, resulting in overeating and excessive weight gain. Recently we finished a study in which we tried to learn whether overeating was related to a particular factor in stress, namely, the resentment some women feel at being pregnant. In our practice we thought we had detected a greater weight gain in women who had a markedly negative attitude toward their pregnancy. We do not mean the pregnant women who, half in jest, wish they weren't, but rather those who state in no uncertain terms that they don't want to be because they are "worn out with the children now" or "too old" or "just don't see how we can afford another one," or, to cite also some newly married women, they weren't "ready" for a family, or the marriage. We also thought we saw more tension, anxiety, irritation, and depression in these women.

To test these assumptions we decided to see what effect an anorectic drug, combined with a tranquilizer, would do to check the excessive weight gains of 2 groups of pregnant women—wanted pregnancies and unwanted ones. Some were to receive an identical placebo (half as many as received the drug). Here we made another assumption, which later proved wrong. We expected that there would be drop-outs, of course, as there are from any study, and we assumed that more would drop out of the active drug group (because of possible side-effects) than would from the placebo group. Just the reverse happened, however, and we were left with a placebo group too small to be meaningful. But we could still compare "wanteds" and "unwanteds" in the drug group. Here, too, we found some interesting surprises.

Altogether we studied 50 pregnant women, all of whom were in apparent good health except that they were gaining weight too rapidly and had reached or would soon reach the 15-pound limit of gain we set for our patients. During prenatal care we elicited an expression of their attitude to the pregnancy. There were 28 "wanted" pregnancies and 22 "unwanted" ones. About three-fourths of them were easily upset, anxious, irritable, and given to rather marked mood changes. The other fourth appeared more in control of themselves but still were emotionally labile.

All were told to cut down on starches, sweets and other rich foods and were given diet sheets to guide them in their calorie counting. In addition, they were given capsules "to help cut down on appetite." These contained either lactose or an anorectic (d-amphetamine 15 mg. and prochlorperazine 7.5 mg.) prepared for sustained release. The capsules all looked alike; the bottles containing them were coded so that the study could be conducted double-blind. The women were instructed to take 1 capsule a day at about 10 in the morning in the belief that the drug would curb the insidious, almost unconscious, practice of snacking during evening television.

Treatment was begun in the second trimester, between the fourteenth and twentieth week. Weight at this time was recorded, and monthly thereafter, and more frequently during the eighth and ninth months. Weight before pregnancy served as the baseline. The gain before and after treatment was recorded for each woman, and was also averaged among each group, the "wanteds" and "unwanteds." Besides taking their weights, we asked whether the capsules helped control appetite. Where appetite control remained poor, or weight gain excessive, and where side-effects or complications developed, the test capsules were replaced by a known anorectic or other appropriate therapeutic measures.

Results

When the drug code was broken at the end of the study we found that 9 of the 11 who were not benefited by the capsules or who developed complications had been taking placebo. Five of these stopped taking it because weight gain or appetite was not controlled. Four others stopped taking it when toxemia, nausea, and persistent nausea and vomiting developed, or when psychiatric referral was necessary (1 patient). Altogether, 17 started on placebo, but after 9 dropped out too few remained for statistical analysis. The remainder of the series (33) started on the anorectic, and 2 dropped out. These 2 patients on the anorectic stopped taking it when preëclampsia developed.

After anorectic treatment the average weight gains in "wanted" and "unwanted" pregnancies were virtually the same, as shown in table 1.

TABLE 1: Average Weight Gain Before and After Drug Treatment in "Wanted" and "Unwanted" Pregnancies

	"Wanted" (17 patients)	"Unwanted" (14 patients)
Before drug (range: 14–20 wks.)	10.5 lbs.	13.3 lbs.
After drug (range: 19–25 wks.)	5.8 lbs.	6.5 lbs.

While attitude to pregnancy had no significant effect on weight gain, the anorectic had a marked effect. The women who took the anorectic gained only half as much weight as they had before treatment.

Appetite control differed somewhat in the 2 groups, even though control of weight was equally satisfactory: 89 per cent of those with a wanted pregnancy felt the drug controlled their appetite, whereas 78 per cent with unwanted pregnancy felt it did. (Only 18 per cent reported satisfactory appetite control with placebos.)

Improvement in emotional status was considerably better in the "wanted" group. Eight of 13 (62 per cent) with marked stress in the "wanted" group became less tense and more stable during treatment; only 3 of 13 (23 per cent) in the "unwanted" group did. When both groups are considered together, more than half of all the women given the drug continued to exhibit signs and report symptoms of tension, which nevertheless did not interfere with management of their problem weight gain.

These results indicate that appetite and weight control with the drug were not a result of emotional improvement, and they make for interesting speculation. The fact nevertheless remains that, in this series at least, weight control was fairly independent of emotional improvement. The tensions of an unwanted pregnancy were not relieved to any appreciable extent, and yet weight control measures in that group were successful.

Of the 33 women who took the drug, 2 discontinued it completely, as already mentioned, and 4 discontinued it temporarily. One of the 4 was overstimulated and was unable to sleep without a sedative at bedtime. Another took her own "weight control pills" for a while and then resumed the capsules given her. One discontinued the capsules when she failed to control weight the first month but then resumed them and subsequently maintained her weight. The fourth was simply unreliable, taking the capsules irregularly.

Edema occurred in the ninth month in 2 women taking placebos and in 1 taking the drug. Edema in all subsided with bed-rest and a diuretic. Two other patients reported overstimulation, which subsided spontaneously, and 2 reported great fatigue, which continued off and on during treatment.

Neonatal Condition

Of the 51 babies born to the 50 women who were studied to term 1 was stillborn and 1 died shortly after delivery. The mother of the stillborn was a 38-year-old woman (gravida I, Para 0) who had received the drug. The mother of the infant who died had developed toxemia in the eighth month of pregnancy; she had received the placebo. Abnormality occurred in 1 other infant, whose mother had received the placebo; the infant, born prematurely, was examined by a pediatric staff member who noted "a mass under the right nipple." The infant, however, was subsequently lost to follow-up.

Summary

Pregnant women who were overeating and gaining weight rapidly were divided into 2 groups —"wanted" pregnancies and "unwanted" pregnancies—to learn whether weight gain in "unwanted" pregnancies was greater and harder to control than in "wanted" ones. Signs of tension, anxiety, irritation, and depression were prominent in both groups. All were told to cut down on rich foods; in addition, they were given an

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Carcinoma of the Thyroid Gland

Report of 94 Cases

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THE IMPORTANCE OF THYROID CARCINOMA has been stressed several times during the last few years by many authors. There are controversial opinions on its significance as a malignant disease, because laboratory methods and clinical evaluation were inadequate in large numbers of cases to determine the presence of a malignant lesion and because of the need of long-term follow-ups to have valuable mortality figures.

The present communication surveys the records of 94 patients from Garfield Memorial Hospital, Emergency Hospital, Episcopal Ear, Nose and Throat Hospital, and the Washington Hospital Center in Washington, D. C., from January 1951 through December 1960.

Incidence

A better knowledge of thyroid pathology, combined with a larger number of operations performed, has resulted in an increased number of diagnosed thyroid carcinomas. Most of these observations were made in the United States, but reports from abroad confirm these statistics.[1] Thyroid carcinoma was found in 336 out of 46,390 cancer patients during a review of one-tenth of the population in 1947.[2] During the period covered by the present study 1,178 surgical procedures were performed on the thyroid gland.

TABLE 1: Distribution of Types of Thyroid Lesions

Nontoxic nodular goiter	556
Thyroid adenoma	263
Thyroiditis	118
Carcinoma	96
Diffuse toxic goiter	91
Toxic nodular goiter	39
Miscellaneous	12
Reticulum-cell sarcoma	3
TOTAL	1,178

Table 1 shows the distribution according to pathologic diagnosis. The diagnosis of carcinoma was made in 96 patients (8.17 per cent), but for 2 of them the records were not complete enough for this review.

These figures confirm the observations of other investigators. Bartels et al[3] reported on 3,753 nodular goiters, of which 5.5 per cent were reported as carcinomas. Williams et al[4] reported 1,330 cases of surgical goiter, of which 7.2 per cent were carcinomas.

In our series 71 patients were female and 23 male; 46 were over 40 years of age and 48 less than 40. The distribution according to age and sex can be seen in table 2.

TABLE 2: Age and Sex Distribution

Age	Female (71)	Male (23)
11–20	5	1
21–30	11	6
31–40	20	5
41–50	8	3
51–60	13	3
61–70	7	2
71–80	5	2
81–	2	1

The youngest patient was a white woman born in 1941 whose disease was diagnosed in 1951. The oldest patient was a white man born in 1868 and diagnosed in 1954. Eleven patients were born in foreign countries.

The ratio of 3 females to 1 male is maintained except for the younger group, in which the ratio is 2½ to 1.[5]

Clinical Evaluation

A careful survey of the 94 records reveals some interesting clinical findings. Of course, not all the patients were examined by the same team of physicians, but the same standards were adopted. The discovery of a thyroid tumor was made in 12 cases (12.8 per cent) during a routine physical examination, and in 5 cases (5.2 per cent) the presenting complaint was other than a mass in the neck (1 case of pleural effusion and 4 cases of hoarseness). The shortest history of the presence of a nodule in the neck was of 1 week, and the longest was 8 years. The average length of time for the known presence of a mass in the neck was about 5 months.

Previous surgical procedures on the thyroid gland had been performed in 7 cases (7.5 per cent). Two patients had carcinoma and eventually were readmitted for further surgery. In 5 cases the previous diagnosis was nontoxic nodular goiter. The appearance of cervical lymphadenopathy in 1 of these cases 2 years after thyroidectomy forced a review of the microscopic sections, and a diagnosis of papillary carcinoma was made. Subsequently total thyroidectomy and bilateral radical neck dissection were performed. Residual tumor in the gland and metastatic carcinoma in the lymph nodes were found.

The physical findings were variable. The smallest nodule described from physical examination measured 0.5 cm., the largest 15.8 cm., and the average size in the 94 cases 3.5 cm. in diameter.

Surgery was performed in 88 cases (92.6 per cent). Six other patients had only biopsies or no surgery at all. Crile reported that the preoperative diagnosis of thyroid carcinoma can be established in 90 per cent of cases.[6] Branson stated that only in 6.8 per cent of the patients can a correct preoperative diagnosis be established.[1] The preoperative diagnosis in our series was recorded in 90 charts. In 35 of these the preoperative diagnosis was carcinoma (38.8 per cent); in 55 the diagnosis was of a benign lesion (61.1 per cent).

The prognosis and treatment depend on the extent of the disease as well as on the pathologic characteristics. In most instances, preoperatively or during surgery the surgeon should be able to determine the proper procedure, but occasionally a final pathologic diagnosis is required before definitive therapy is instituted. The present series of cases were classified as follows:

Stage I.	Disease confined to 1 lobe
Stage II.	Disease in both lobes
Stage III.	Lymph-node metastasis
Stage IV.	Disseminated disease

Table 3 shows the stage distribution of the 94 cases according to sex and age.

Treatment

Surgical excision remains the most effective therapeutic procedure for the control of this disease. Ninety patients were operated on, 88 for an attempted cure and 2 for diagnosis only. The macroscopic appearance of the tumor at the time of surgery and the pathologic diagnosis by means of frozen sections will help the surgeon determine the extent of the procedure.[7] In this series lobectomy was performed in 34 cases (37.8 per cent), total thyroidectomy in 25 (27.6 per cent), unilateral radical neck dissection in 19 (21.1 per cent), bilateral radical neck dissection in 10 (11.3 per cent), and biopsy in 2 (2.2 per cent).

TABLE 3: Stage Distribution by Sex and Age

Stage	Female		Male		Total
	Less 40 yrs.	Over 40 yrs.	Less 40 Yrs.	Over 40 yrs.	
I	11	27	5	1	44
II	3	3		3	9
III	14	5	7	2	28
IV	1	7	1	4	13

There was no general agreement on which procedure should be performed when the disease was diagnosed. Table 4 shows the type of operation that was performed according to the extension of the disease.

TABLE 4: Procedure According to Stage of Disease

Stage	Lobectomy	Total Thyroidectomy	Unilateral Neck Dissection	Bilateral Neck Dissection	Biopsy
I	30	12	2		
II	1	7			
III	2	4	14	5	
IV	1	2	3	5	2

The presence of contralateral disease has been described by many authors.[5, 7, 8] In the Washington Hospital Center Winship[9] demonstrated that in 21 consecutive cases of papillary carcinoma, tumor in the opposite side was found in 17 (81 per cent). The microscopic evidence of contralateral disease in that large number of cases, although not clinically detectable, indicates the need for a total thyroidectomy in the presence of carcinoma. The indications for a radical neck dissection, unilateral or bilateral, depend on the existence of metastatic carcinoma in the cervical lymph nodes. The cosmetic and functional results of this operation should be considered. The preservation of the sternocleidomastoid muscle, the jugular vein, and the spinal accessory nerve is advisable if not involved by tumor. Technically, this does not prolong the operation and still an adequate cancer procedure can be performed.[10]

Other methods of treatment for thyroid carcinoma have been emphasized.[11, 12] External radiation and the therapeutic use of I^{131} have not been employed often in these patients. Following surgery or just a biopsy 6 patients received external radiation and 2 I^{131}. Conclusions concerning this type of therapy are of no value from the small number of cases treated.

Morbidity

An overall morbidity of 12.2 per cent was found in the 90 surgical procedures. The complications were hypoparathyroidism in 8, bilateral pneumothorax in 1, postoperative hemorrhage in 1, and laryngeal edema in 1.

Temporary injury to the parathyroids and the subsequent development of hypocalcemia were observed in 4 cases (13.8 per cent) following radical neck dissections and in 4 cases (16 per cent) following total thyroidectomy. The complications listed above occurred only following radical neck dissections or total thyroidectomies.

Follow-up

During the 10 years 17 patients (18 per cent) are known to be dead. In some instances the cause of death was not established, and in some the cause of death was unrelated to the thyroid carcinoma and no evidence of residual disease was found. A brief summary of each of the patients known to be dead is given in table 5.

TABLE 5: Summary of Each Patient Known to Be Dead

Patient	Age	Sex	Clinical Findings	Surgical Procedure	Pathology	Cause of Death
LW	63	F	2.2 cm. left lobe nodule	Left thyroidectomy 5/57	Undifferentiated ca	Myocardial metastasis
HS	71	M	Previous surgery for thyroid ca 1955	Exploration neck 1956	Same	Extensive neck metastasis 1956
FL	85	F	3 yr. neck swelling 1958	Biopsy	Same	Wide metastasis 1958
JE	61	M	Left lobe node	Total thyroidectomy; unilateral radical neck dissection	Same	Wide metastasis 1958; died 1958, cause ?
JS	69	M	Dysphagia and dyspnea	Thyroidectomy	Same	Died 28th day postoperatively of pulmonary embolus
ES	81	F	Neck swelling	Thyroidectomy 5/55	Same	Died 11/55 of lung and heart metastasis
EN	86	M	Rapidly growing neck mass	Total thyroidectomy	Same	Died 5th postoperative day of pulmonary embolus
EG	81	F	Mass in neck 4 mos.	Total thyroidectomy 1954	Same	Wide metastasis; died 1955
PS	50	M	1.5 cm. node left lobe	Subtotal thyroidectomy 3/51	Same	No evidence of disease
EP	60	F	2 yr. neck mass	Total thyroidectomy and rt. radical neck dissection 5/52	Papillary	Pulmonary metastasis 1961
RP	60	M	2 yr. neck mass	Total thyroidectomy and rt. radical neck dissection	Undifferentiated ca	Cardiac arrest in O.R.
WG	35	M	Enlarged neck	Total thyroidectomy and bilateral radical neck dissection	Papillary	Wound infection; pneumonia, pulmonary edema, 15 days postoperatively
MM	65	F		Total thyroidectomy and bilateral radical neck dissection	Undifferentiated ca	Pulmonary embolus 15th day postoperatively
IJ	69	F	6 mos. neck mass; lymphadenopathy	Biopsy 10/55	Same	Wide metastasis 1956
LW	74	F	Hoarseness and neck swelling	Left lobectomy 6/59	Follicular	Wide metastasis 12/59
MB	69	F	5 mos. neck mass	Total thyroidectomy	Undifferentiated ca	Cancer of rectum
RM	61	F	Recurrent node after thyroidectomy	Total thyroidectomy	Follicular	Cardiac arrest in O.R.

During the first 30 postoperative days 5 patients died (2 of cardiac arrests, 1 of wound infection, pneumonia and pulmonary edema, and 2 of pulmonary embolism).

Recurrent disease is evident in 3 cases, and in all instances the location is in the neck and lungs.

Pathology

The histologic variety of the tumor was established in 90 cases. The average size of the lesion when examined as a surgical specimen was 2 cm. in diameter. There were 62.5 per cent papillary carcinomas, 17.8 per cent follicular carcinomas, and 19.7 per cent undifferentiated carcinomas.

A review of large series of cases from different clinics[13] confirms that papillary carcinoma is by far the most common tumor. Follicular carcinoma is reported only if the tumor has follicular components exclusively. Undifferentiated tumors are those malignant tumors with neither papillations nor follicles; not all of these are anaplastic (highly malignant), and they are most frequently encountered in elderly people.[14]

The natural history of the papillary and follicular carcinomas is somewhat similar. Both are slow-growing tumors, and both metastasize primarily through the lymphatics. Undifferentiated carcinomas are usually rapidly growing tumors and metastasize by direct extension and by the blood stream.

Comment

There are several reasons for the increase in the diagnosis of thyroid carcinomas in the last decade. A better knowledge of thyroid gland pathology, radiation therapy during childhood, and the increased numbers of surgical procedures are the most prominent. Nation-wide, 7 per cent of all thyroids removed during surgery are carcinomatous.[15, 16, 17] The fashion in which the tumor presents itself is of great diversity. Of the solitary nodules, 8.5 to 25 per cent are carcinomas; of the nontoxic nodular goiters, 2 to 8 per cent are carcinomas; and there is an occasional case of thyroiditis or toxic goiter that undergoes cancerous change.[18]

Surgical excision remains the most effective therapeutic weapon for this disease. Radical procedures should be performed only in the presence of metastasis.

Only 0.5 per cent of all cancer deaths can be attributed to thyroid carcinoma.[6, 18] The 5-year survival is very high.[13, 19] In the present survey the 5- to 10-year survival is not demonstrated, since 33 per cent of the patients were lost to follow-up, and the majority of the diagnoses were made less than 5 years ago. A reëvaluation of the present cases will be needed in the future.

Summary

The records of 4 institutions have been reviewed (from 1951 through 1960) to determine the incidence, treatment, pathology, and follow-up of patients with thyroid carcinoma. Most of the observations are in accordance with the results published in other centers. A reëvaluation of the present cases in years to come will provide more information for a valuable follow-up.

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Some Current Concepts in Infectious Diseases*

Part V. Prophylactic, Combined, and Antistaphylococcal Therapy Including Pertinent Clinical Axioms

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Attempts at Antimicrobial Prophylaxis

Despite evils that have been perpetrated in the name of antimicrobial prophylaxis, its legitimacy, though more limited than its application, remains recognized.[1-6] Success has been achieved in the prevention of streptococcal infection in patients having had rheumatic fever and in the prevention of endocarditis and endarteritis in patients having certain congenital and acquired cardiovascular defects. Similar achievements have been accomplished in management of the contacts of those having meningococcal or Shigella infection, in preventing blood-stream invasion in patients having urinary infection and subjected to urethral manipulation, and in preventing recurrent lymphangitis and consequent lymphedema in patients having congenital or postoperative abnormalities of the lymphatic system.

Compounded musculoskeletal injury, penetrating wounds of joint spaces and of body cavities, exchange transfusions including dialysis, prolonged labor when the membranes have been ruptured longer than 24 hours, and skull injuries with otorrhea or rhinorrhea requiring protection against meningitis appear to be justifiable indications for antimicrobial prophylaxis. Such prophylaxis also appears warranted in attempts at prevention of bacterial invasion in the management of certain inflammatory lesions such as perforated peptic ulcer, acute pancreatitis, and acute diverticulitis of the colon. Attempts at prophylaxis appear warranted, at least on an investigational basis, in certain patients having acute bronchitis as may follow inhalation of noxious substances such as smoke or chemicals, especially when superimposed bacterial infection of environmental origin is likely, in victims of mucoviscidosis, and for neurologic disturbances in patients having hepatic coma.

Attempts to prevent spread of infection during surgical intervention in active infection (tuberculosis, mycosis,[7-10] brucellosis[11-15]) are not prophylaxis in the usual sense, but a continuation of specific therapy. Use of tetracyclines in patients having pneumonitis and rising cold agglutinin titers, which may reflect infection with the Eaton (PPLO) agent, also resembles definitive therapy more. In "clean" operations an attempt at antimicrobial prophylaxis is potentially dangerous since it extends the time during which contamination can become infection, encourages superinfection, enhances the possibility of resistant microorganisms emerging, and may incite allergic and other toxic reactions. Bacterial contamination per se may not cause surgical-wound sepsis unless a fault in wound healing or depression of the host's defense mechanisms (or both) is also present.

Syphilis of the newborn may be prevented by treating the syphilitic mother with antimicrobial agents during pregnancy.

Subsequent serious disease may be prevented by effective treatment of a primary infection, as exemplified by the successful treatment of otitis media in the prevention of mastoiditis, or the treatment of bacterial pneumonia in the prevention of empyema.[16]

In the burned patient, systemic antimicrobial prophylaxis has been disappointing and may have resulted in lethal superinfections, such as Pseudomonas bacteremia.[17-20]

Attempts at antimicrobial prophylaxis in patients having certain viral or noninfectious diseases may, by causing alterations in the bacterial flora, actually aid in the selection of bacterial pathogens which are further encouraged to overgrow and cause fatal superinfection. As an example of this, administration of antimicrobial agents in patients with bulbar poliomyelitis may be followed by secondary bacterial complications more than twice as often as in a nontreated group. In measles, secondary bacterial infection in patients receiving an antibacterial agent is more frequent than in those not receiving it. The incidence of secondary bacterial infections is not reduced in patients treated with antibiotics for pertussis, mumps, chickenpox, and so forth.

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Routine prophylactic administration of antimicrobial drugs in patients subjected to urinary catheterization or manipulation is of no protective value and may actually encourage serious superinfection. Conversely, control of known infections should be attempted before manipulation of the urinary tract.[3, 4, 21, 22] The giving of small amounts of an antimicrobial agent the first few days of the month or more often to patients having recurrent urinary infection or to those having chronic bronchitis with acute exacerbations, preparation of the bowel for operation, and attempts to eliminate various carrier states appear to warrant continued investigation.

Combined Antimicrobial Therapy

Simultaneous administration of 2 or more antimicrobial drugs may be more effective in certain infections than the constituent agents used individually.[12, 19, 23-26] True synergism rarely results from such combined therapy, and enhanced activity more commonly represents an additive effect.

In patients having subacute bacterial endocarditis due to enterococci the addition of streptomycin is more likely to be curative than is the use of penicillin alone. Brucellosis also appears to respond more quickly, to require less prolonged therapy, and to be not so likely to relapse when treated with a combination of streptomycin and tetracycline than when treated with tetracycline alone. Erythromycin, novobiocin or chloramphenicol, when combined with neomycin, kanamycin or bacitracin, has eradicated systemic infections due to *Staphylococcus aureus* not responding to one of the agents given individually. Also, in the latter cases the toxicity of a bactericidal agent, such as bacitracin, may be circumvented when it is given in amounts unlikely to produce untoward effects and the dosage is supplemented by another agent, such as the bacteriostatic erythromycin. Combined antimicrobial therapy in tuberculosis is well accepted, and generally preferable to management with a single agent. Combined penicillin-sulfonamide therapy of pneumococcal meningitis appears to give better results than treatment with either agent alone. Streptomycin alone has been effective in the management of cases of *H. influenzae* meningitis, but combined streptomycin-tetracycline therapy appears to be more effective. Our data indicate that, in general, bacteremia due to gram-negative enterobacilli is more likely to respond to combined streptomycin-tetracycline therapy than to the use of either agent singly.

Situations other than these "specific" ones in which combined antimicrobial therapy may have application include those in which (1) multiple organisms are probably present (peritonitis) or have been identified microbiologically (urinary infection), (2) the causative agents have not been isolated but infection appears clinically certain (bacteremic shock), (3) the causative agents cannot be isolated (postoperative intra-abdominal abscess), and (4) satisfactory results are not obtained with a single agent, and combined therapy evaluated by so-called serum bactericidal tests[27, 28] may indicate a logical basis for continuation of a more elaborate regimen.

Prepackaged combinations of antimicrobial agents are to be condemned because of one's inability to tailor such a combination so as to make it acceptable and effective in all cases at the dosage used.

Combined antimicrobial therapy is not an unmixed blessing because (1) it entails an increased risk of superinfection, (2) it increases the danger of allergic reactions, (3) it may cause emergence of resistant organisms, (4) it entails extensive and highly technical bacteriologic study, (5) it introduces or increases the employment of parenteral therapy, (6) it is more expensive, and (7) it may contribute to a false sense of security and to less comprehensive evaluation of patients.

Antistaphylococcal Regimens

The treatment of staphylococcal infections depends largely upon results of in vitro susceptibility tests.[26, 29-34] If staphylococci are sensitive to penicillins G and V, they remain the drugs of choice. In mild infections orally administered penicillin V has been successful; penicillin V and the semisynthetic phenethicillin can be used interchangeably. In at least half the patients without hospital contact penicillins G and V remain effective and the drugs of choice in staphylococcal infections. When susceptibility tests indicate that a staphylococcus resists penicillins G and V but is sensitive to methicillin (Staphcillin®) or oxacillin (Prostaphlin®) and to other antibacterial agents, selection of the pertinent agent depends on (1) the nature of the infection and the need for a bactericidal effect and (2) considerations of comparative toxicity and convenience of administration. Using these criteria, one may roughly divide staphylococcal infections into 3 groups in attempting to indicate the clinical potential of these semisynthetic penicillins.

In the first group, wherein the clinical potential of the semisynthetic penicillins is probable, the outstanding entity is staphylococcal bacterial endocarditis. In such endocarditis resistant to other penicillins, methicillin and oxacillin deserve thorough investigation, since they appear to be less toxic than other bactericidal agents such as vancomycin, kanamycin and ristocetin. It is generally accepted that eradication of staphylococcal bacterial endocarditis requires use of agents capable of bactericidal effect. Also, use of methicillin and oxacillie would be less cumbersome than combined therapy with the so-called bacteriostatic agents such as erythromycin, novobiocin and chloramphenicol, which are generally considered to be ineffective when used alone in bacterial endocarditis, together with such bactericidal agents as bacitracin and kanamycin (or neomycin).

Methicillin and oxacillin may qualify as effective agents in bacterial endocarditis since they are bactericidal, but one should recall that they are less bactericidal, weight for weight, than penicillin G. Also, the doses recommended for these agents are considerably smaller than those that have been employed in therapy with penicillin G.

In the second group of staphylococcal infections, wherein the clinical potential of these agents is possible, are included such diseases as bacteremia, meningitis, pneumonia, internal abscesses, peritonitis, mastoiditis, bacterial arthritis, and selected severe urinary infections. If one accepts bacteremia as exemplifying this group, it is seen that the need for agents with the potential of methicillin and oxacillin is not so great in this group as in bacterial endocarditis. This is so because erythromycin and novobiocin have been effective in staphylococcal bacteremia; since these agents have been about as effective as penicillin G had been when that agent was first introduced, it will be welcome but surprising if methicillin and oxacillin prove more effective. Since erythromycin and novobiocin can be given orally and are relatively nontoxic, and since one wishes to minimize the use of methicillin and oxacillin so as to minimize staphylococcal resistance to them, there are several reasons why these drugs are not automatically the agents of choice in these infections. It seems reasonable to use methicillin or oxacillin before considering the use of a more toxic agent such as vancomycin, kanamycin, chloramphenicol, ristocetin, or combined therapy as outlined above, in about that order of choice. There is no gross objection to the giving of methicillin or oxacillin when cultures indicate a staphylococcus to be causative in an infection of this group but before the results of susceptibility tests have been reported; when these results become available one can change the regimen if an equally effective or less toxic agent can be substituted.

In the third group of staphylococcal infections, wherein the clinical potential of methicillin or oxacillin appears less probable at this time, are included such conditions as primary and secondary cutaneous infection, wound infection, dental abscess, mastitis, otitis, sinusitis, pharyngotonsillitis, enteritis, osteomyelitis, and most urinary infections. In addition to the availability of other effective, orally absorbable, less toxic antibiotics and the desire to minimize the use of methicillin and oxacillin so as to minimize staphylococcal resistance to them, the infections in the third group demand less heroic therapy since they are unlikely to prove fatal if they remain uncomplicated. Many of the infections in this group need no, or only minimal, antibacterial therapy, since many of them subside spontaneously or after surgical drainage. Most of them are "open infections," unlike the infections in the preceding 2 groups, and their discharges are likely to cause greater dispersal of any strains that acquire resistance. Also, osteomyelitis frequently is a chronic infection, and prolonged therapy with methicillin or oxacillin may enhance staphylococcal resistance to these agents.

If one attempts to present, in order of general choice, the agents used in this third group of infections, it is obvious that such heroic efforts as use of vancomycin or combined therapy will rarely if ever be necessary in pharyngotonsillitis, dental abscess, and the like. Generally speaking, if the staphylococci resistant to penicillins G and V are sensitive to erythromycin, it may be the agent of choice since it is orally absorbed and virtually nontoxic. Next, one can consider triacetyloleandomycin, which is also orally absorbed, since there is about a 70 per cent chance that erythromycin-resistant staphylococci may be sensitive to its action. However, like the propionyl ester of erythromycin, it is potentially hepatotoxic, especially if given longer than 2 weeks. Thereafter, one might consider using novobiocin.

If erythromycin, triacetyloleandomycin or novobiocin cannot be used, then methicillin or oxacillin may be the drug of choice. When these drugs are not applicable, as in patients who have known allergy to penicillin, kanamycin may be tried. Kanamycin precedes consideration of vancomycin since, while both are ototoxic, kanamycin is given intramuscularly while vancomycin must be given intravenously. Chloramphenicol follows vancomycin in choice, despite its being absorbed when given orally, because of its propensity to depress the bone marrow, and precedes consideration of ristocetin, which also has a hematotoxic effect but has the added disadvantage of requiring intravenous administration. Before or after consideration of chloramphenicol and ristocetin, depending on one's fear of ill effects on the marrow as well as depending on the laboratory facilities available, one can consider combined antibiotic therapy as outlined previously. However, the need for such cumbersome therapy is rare in infections of this group. Excellent laboratory facilities are required for intelligent application of combined therapy. Evaluation of combined therapy via serum bactericidal tests during treatment with agents empirically selected may be preferable to that based on pretreatment in vitro susceptibility tests with the use of various agents in combination. If one uses the latter method, one should check in vivo results with serum bactericidal tests to ascertain whether the effect predicted by the in vitro tests is being obtained.

Because of the effect of the tetracyclines on the bodily flora, with possible staphylococcal superinfection, we avoid giving these drugs to hospitalized patients. Streptomycin, because staphylococci develop resistance to it rapidly, and polymyxin B, which lacks significant antistaphylococcal action, usually are not considered in the treatment of staphylococcal infections. Of the chemotherapeutic agents, nitrofurantoin (Furadantin®), because blood concentrations of it are minimal and fleeting, is used only in certain mild urinary infections. Sulfonamides, because of the problem of resistance, play no major role in managing serious staphylococcal infections.

One must rely to some extent on susceptibility tests in the management of staphylococcal infections, but time does not always allow such investigation. When staphylococcal infections demand treatment before such data are available, one gives a drug to which the staphylococci are most likely sensitive. Novobiocin, methicillin or oxacillin, kanamycin, vancomycin and chloramphenicol might be selected in about that order of choice, and when susceptibility tests are known, one may substitute a more pertinent or less toxic agent. In instances of suspected staphylococcal bacterial endocarditis, of course, one would not consider the use of the bacteriostatic agents novobiocin and chloramphenicol.

One may summarize the data of clinical importance regarding methicillin or oxacillin as follows:

1. These agents should be used only in selected, serious staphylococcal infections when organisms demonstrate resistance to penicillins G and V.
2. They should not be used in patients who have had allergic reactions to other penicillins, since cross allergenicity is known; as with other penicillins, they should not be used in patients with other allergies, particularly asthma, unless need is overriding.
3. A higher concentration of these drugs in serum is required to exert a comparable bactericidal effect than is necessary with penicillin G, since the agents, while bactericidal, are less so than penicillin G, weight for weight in vitro; this is compounded by the fact that the recommended doses of methicillin or oxacillin are considerably less than the amounts of penicillin G that have been given, for example, up to 100,000,000 units daily.
4. One must avoid indiscriminate use of methicillin and oxacillin; otherwise, since the degree of resistance to an agent is correlated with the amount of the drug being used in a geographic area, and since resistance to the agents has been demonstrated in vitro, the incidence of resistant strains will probably increase. Also, with cross allergenicity among the penicillins, indiscriminate use of methicillin and oxacillin will further contribute to the problems of allergy to penicillin which already are sizable.

Clinical Axioms

Prophylactic therapy. 1. Eradication of group A streptococci from the pharynx and inhibition of antibody response can be achieved with either intramuscular or oral administration of penicillin whenever such regimens are instituted early and suitable levels of penicillin are maintained in the blood for at least 10 days. Erythromycin may be employed for individuals allergic to penicillin.

2. Regimens of penicillin for the treatment of streptococcal pharyngitis are as follows: (a) intramuscular injection of either a single dose of benzathine penicillin G (1,200,000 units), or procaine penicillin G (600,000 to 1,200,000 units) given every third day for 3 doses, and (b) oral administration of penicillin V or phenethicillin in amounts of 125 to 250 mg. (200,000 to 400,000 units) given 4 times daily for 10 days.

3. The recurrence rate during the first 20 years after the initial attack of rheumatic fever warrants the administration of penicillin for this period. Thereafter, the rationale of continuing penicillin indefinitely becomes more arbitrary and dependent on individual circumstances.

4. Regimens of penicillin for the prophylaxis of streptococcal infections are as follows: (a) intramuscular injection of benzathine penicillin G, 1,200,000 units every 4 weeks, and (b) oral administration of penicillin V or phenethicillin, 125 to 250 mg. (200,000 to 400,000 units) 2 to 4 times daily for at least the first 10 days of each month.

5. Oral administration of penicillin in the prophylaxis of streptococcal infection is practically free of side-effects, but is dependent on the patient's continuous coöperation in taking the drug. Benzathine penicillin G, administered at regular 4-week intervals, requires no patient coöperation but is associated with a higher incidence of untoward reactions. As a generalization, however, injection of benzathine penicillin G every 28 days appears to be the most practical prophylactic method to prevent recurrences of rheumatic fever.

6. Unless a history of allergy indicates otherwise no patient with a significant known heart murmur or a known cardiovascular defect predisposing to endocarditis or endarteritis should undergo oral, colonic, rectal or transurethral operative procedures without preoperative administration of penicillin. Erythromycin may be employed in patients allergic to penicillin.

7. Four million units of penicillin V given orally in 4 divided doses beginning 24 hours preoperatively appears to be as effective as other forms of penicillin given on differing schedules in decreasing bacteremia after oral surgical procedures.

8. In management of the contacts of patients having meningococcal or Shigella infections, a sulfonamide given in amounts of 0.5 to 1 Gm. 4 times daily for 1 week appears to be satisfactory.

9. The recurrence rate of urinary-tract infections appears to increase proportionately to the time patients are followed, which emphasizes the desirability of periodic reëvaluation and perhaps reconsideration of antibacterial prophylaxis.

10. In patients having urinary-tract infection in whom antibacterial prophylaxis appears indicated, usually a sulfonamide is given in amounts of 0.5 Gm. 2 to 4 times daily the first 5 to 7 days of the month.

11. In patients having acute recurrent urinary-tract infection without detectable predisposing uropathy or systemic disease, one may elect to discontinue antibacterial prophylaxis after 6 months in the hope that further medication will not be required.

12. In patients having chronic urinary-tract infection intrinsically insusceptible to eradication, antibacterial prophylaxis may be continued indefinitely, especially if exacerbations are thereby lessened, in the hope that the degree of progressive renal damage is being reduced.

13. Urinary-tract infection in the diabetic warrants vigorous antibacterial treatment to forestall both necrotizing papillitis and bacteremia due to gram-negative enterobacilli.

14. Penicillin given either as benzathine penicillin G (1,200,000 units) intramuscularly once a month, or in the orally administered form of penicillin V or phenethicillin (0.5 to 1 Gm.) daily in divided doses for 1 week each month, may prevent further lymphangitis in patients having lymphedema. Progression in the lymphedema may be prevented. Erythromycin may be employed for individuals allergic to penicillin.

15. It is not always easy to defend the view that the advantages of attempts at preoperative intestinal antisepsis with antibacterial agents outweigh the disadvantages. Staphylococcal enterocolitis is the complication which, to the greatest extent, militates against "risk-free" use of antibacterial agents in this manner; however, other superinfections including bacteremia also appear to have eventuated.

Combined therapy. 1. Although infections of the blood stream caused by *Streptococcus pyogenes* are adequately treated with penicillin alone, bacteremia due to other strains of streptococci may be managed better by combined streptomycin-penicillin therapy.

2. Subacute bacterial endocarditis caused by *Streptococcus viridans* can be managed successfully by means of a 2-week course of procaine penicillin G in doses of 1,000,000 units, plus use of 1 Gm. of streptomycin, both injected intramuscularly every 12 hours. A similar regimen is used in patients with bacteremia due to *Streptococcus viridans*, but one discontinues therapy when the patient has been afebrile for 72 hours and the results of 3 consecutive blood cultures have been reported as negative.

3. When either endocarditis or bacteremia is due to *Streptococcus faecalis*, aqueous crystalline penicillin G given by continuous intravenous drip and streptomycin injected intramuscularly in amounts of 0.5 Gm. every 12 hours have given satisfactory results. The daily dose of penicillin is determined in part by results of the so-called

serum bactericidal test; usually it varies from 20,000,000 to 100,000,000 units. That dosage is accepted when the patient's serum obtained after a given dose of penicillin and diluted 1:4 or more produces an in vitro eradicative effect on cultures of the organism responsible for the infection. Such a regimen is continued for 4 to 6 weeks in cases of endocarditis and in cases of bacteremia as described for those due to *Streptococcus viridans*. In cases of bacteremia 1 Gm. of streptomycin may be given every 12 hours.

4. In the treatment of acute brucellosis tetracycline is given orally in amounts of 500 mg. every 6 hours, and 1 Gm. of streptomycin is injected intramuscularly twice daily for 2 weeks. Treatment of chronic, localized brucellosis is continued for 4 weeks, and 0.5 Gm. of streptomycin is given twice daily in addition to tetracycline.

5. The tetracyclines in conjunction with streptomycin also are used in serious infections due to gram-negative bacilli of enteric origin such as coli-aerogenes and Proteus, in meningitis due to *H. influenzae*, in pneumonia due to *K. pneumoniae*, and in plague.

6. Streptomycin-tetracycline treatment for serious infections caused by gram-negative bacilli of enteric origin may be preferable for several reasons. Streptomycin alone is inadequate because of the high failure rate following its use and because bacteria quickly become resistant to it. The onset of bacterial resistance may be delayed by use of multiple antibiotics. By means of combined therapy an enhanced effect may be obtained, and when given after identification of bacteria and before the results of inhibition tests are known, broader antibiotic coverage is provided.

7. In regard to gram-negative bacteria of enteric origin the degree of cross-resistance between chloramphenicol and tetracycline is not absolute. It is worthwhile in certain severe infections due to such gram-negative organisms not responding to tetracycline-streptomycin therapy to procure in vitro inhibition tests with chloramphenicol and kanamycin with a view to substituting one or both agents.

8. In meningitis or endocarditis due to *Mima polymorpha* combined sulfonamide-tetracycline therapy has been effective. In bacteremia or urethritis due to these organisms, tetracycline alone suffices.

9. Chloramphenicol remains the drug of choice in typhoid fever, but streptomycin-tetracycline therapy may be more effective in other systemic Salmonella infections. As in cases of gastroenteric shigellosis, oral administration of neomycin and polymyxin B in combination has been effective in cases of Salmonella gastroenteritis.

10. Although bacitracin has been used effectively in combination with other agents, such as chloramphenicol, against serious staphylococcal infections in which use of a single agent has not been so effective, with the availability of other effective antistaphylococcal agents systemic use of bacitracin has declined.

11. In patients having meningococcal meningitis either sulfonamides or penicillin may be employed with success, but in those having pneumococcal meningitis best results appear to follow combined sulfonamide-penicillin therapy.

12. Of the various clinical states of listeriosis (*L. monocytogenes*) meningitis is most common. It is of highest incidence in the pediatric and geriatric age groups. Penicillin or tetracycline may be effective; in some cases, in vitro inhibition data to the contrary, conjoint use of streptomycin has appeared to be of added clinical effectiveness.

13. In the treatment of polymicrobic infections several drugs may be given simultaneously, for example, penicillin and streptomycin in enterococcal infections, and, simultaneously, a tetracycline against coli-aerogenes. Since it is difficult to say which organism is most important in polymicrobic infections, one gives broad coverage. However, one attempts to keep the number of agents minimal and rarely resorts to such an antibiotic umbrella.

14. In cases of presumed acute bacterial meningitis, after procurement of specimens for microbiologic investigation, antibacterial therapy encompassing the most common etiologic possibilities may be given. Penicillin, a sulfonamide, and chloramphenicol will "cover" *H. influenzae*, meningococci and pneumococci. After microbiologic data are available a more pertinent or less toxic regimen may be substituted.

15. Use of multiple antibacterial agents not only is unnecessary in many cases but might, some experimental data to the contrary, increase bacterial resistance more rapidly than if infections were treated with a single agent. In other words, restricted employment of combined therapy may delay the onset of bacterial resistance on the part of the individual pathogen, but indiscriminate use of multiple agents may increase general bacterial resistance, since such resistance is a direct function of the total amount of a given antibacterial used in a given community.

Antistaphylococcal therapy. 1. Methicillin (Staphcillin) is administered intravenously or intramuscularly in amounts of 1 to 2 Gm. every

4 to 6 hours. Peak serum levels are reached about ½ hour after intramuscular administration. With single doses, serum concentrations decrease rapidly and may decline below therapeutic levels after 3 or 4 hours.

2. Oxacillin (Prostaphlin) is acid-resistant and can be given orally as well as parenterally. It is given in an oral dose of 0.5 to 1 Gm. 4 to 6 times daily. Food appears to interfere with the intestinal absorption of oxacillin and decreases serum levels.

3. Oxacillin does not appear to diffuse readily into the various body cavities and is not likely to be present in substantial amounts in body fluids.

4. Methicillin at best is only about a third as effective as penicillin G against pneumococci and streptococci. Oxacillin in general is more effective than methicillin against pneumococci and streptococci but is not as effective as penicillin G.

5. Weight for weight, oxacillin usually is more effective than methicillin against staphylococci.

6. Ampicillin® (alpha-aminobenzyl penicillin), a semisynthetic orally administered agent currently under investigation, is effective against strains of *E. coli* and Proteus but ineffective against Pseudomonas and Klebsiella organisms. It is less active against gram-positive cocci than penicillin G.

7. Staphylococcal resistance to neomycin has increased somewhat in recent years, apparently owing to the fact that this drug has been incorporated in procedures used to prepare the colon preoperatively.

8. Kanamycin is utilized chiefly because it is active against staphylococci; in this regard it should be recalled that neomycin and kanamycin are cross-resistant.

9. Currently, vancomycin's chief use appears to be in patients with staphylococcal endocarditis who are allergic to penicillin. Vancomycin is administered intravenously in a daily amount of 2 Gm. divided into 2 to 4 doses; in staphylococcal endocarditis this is continued for at least 3 weeks.

10. In patients with staphylococcal endocarditis who are allergic to penicillin and who cannot tolerate vancomycin, kanamycin or ristocetin may be used.

11. Vancomycin is one of 5 antibiotics that are not well absorbed when given orally and are applicable to the management of staphylococcal enterocolitis; the others are bacitracin, neomycin, ristocetin and kanamycin.

12. In patients having staphylococcal enterocolitis who are unable to accept medication by mouth, administration of an agent by stomach tube is frequently possible and preferable to parenteral administration, which is less often effective.

13. There is no objection to giving orally absorbable agents to patients having staphylococcal enterocolitis aside from the fact that the infection is a local one and a systemic antibacterial effect is not mandatory. Since treatment often is necessary before the results of susceptibility tests are reported, one may give the orally unabsorbed agents that are less frequently used systemically because of their toxicity and to which, consequently, staphylococci are more likely to remain sensitive.

14. Like vancomycin, ristocetin can be administered only intravenously and generally is reserved for staphylococcal infections resistant to more commonly employed antimicrobial agents.

15. The recommended daily dose of ristocetin is 2 to 6 Gm. given intravenously in 2 to 3 equal parts at 8- to 12-hour intervals. It can be injected slowly with the required dose dissolved in 150 to 500 ml. of 5 per cent dextrose in water, or by giving it in 30 to 40 ml. of 5 per cent dextrose in water by syringe over a period of 10 minutes.

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(*Continued on page 526*)

Cholestatic Jaundice, Liver Decompensation, and Shock Resulting from Tolbutamide

Report of a Case

THOMAS F. McMAHON, M.D.

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Each year many new drugs appear to increase the health and longevity of mankind. Some prove most useful toward this end, others rapidly disappear because of their lack of facility or downright toxicity. But each drug, good as well as bad, is a double-edged sword. Occasionally it is only after years of utility that we find the unusual toxic effect in certain cases that must make the physician continually cautious. Such a case is here reported in which tolbutamide (Orinase®) was not only a secondary failure in the control of this patient's diabetes mellitus but also resulted in severe liver disease, cholestatic jaundice, and shock, from which a complete recovery was made following withdrawal of the drug.

Report of Case

A 50-year-old, dark-complexioned white man, A. G., was first seen in my office 2 years previously for a routine examination, at which time diabetes mellitus was discovered. He was given tolbutamide 1.0 Gm. daily and was to be followed by his own physician. It was subsequently learned that he was not seen for any follow-up in this interim and was next examined at his home on March 1, 1961, at which time he was bedridden, partially moribund, dehydrated, and complaining of high abdominal pain and vomiting of 3 to 4 days' duration. He was found hypotensive (70/50) and had a moderate icterus. He denied any alcoholic intake although several whiskey bottles were seen in his room. This he explained was only for the use of his visiting friends.

He was admitted by ambulance to Providence Hospital, Washington, D.C. as a medical emergency. He was in shock, partially disoriented, had an arrythmia, and was given the provisional diagnosis of liver failure with impending coma. The initial laboratory work showed the blood sugar to be 364 mg., the blood urea nitrogen 60 mg., the CO_2 13, the hemoglobin 13.4 Gm., the hematocrit 42, and the white blood cell count 9,800 with normal differential. Urinalysis showed 4+ albumin, 2+ sugar, bile, 2 to 4 red blood cells, and 5 to 10 white blood cells. Scleral icterus was observed along with moderate ascites and distention and a palpable liver 2 fingerbreadths below the costal margin. The past history was substantiated as definitely negative for alcoholism or previously known liver disease.

During the first 3 days the patient was in extremis and was treated for shock with pressor agents and 1 blood transfusion, since it was feared that esophageal bleeding might be occurring or that acute hemorrhagic pancreatitis might have occurred. Further laboratory reports indicated the serum amylase to be 72 and 100 on the second day of admission with the blood sugar 813, the urea nitrogen 82, the blood chlorides 87, and the CO_2 17, prothrombin time 80 per cent of normal activity, with serum albumin 3.3 and globulin 2.7 Gm., ammonia 26 mg., SGOT 83 units, and a negative L.E. prep. The stool was guaiac positive. The serum bilirubin was 13.2 mg. with 8.8 mg. direct and 4.4 mg. indirect.

The alkaline phosphatase was 6.3 units and the cephalin flocculation 1+ in 48 hours. An X-ray film of the chest on the second day (portable) revealed normal lungs and no hydrothorax but "minimally enlarged left ventricular prominence."

Supportive therapy was given during the first 3 moribund days and regular insulin substituted for tolbutamide. The patient required approximately 60 units of insulin daily to control his diabetes. The urinary output remained adequate throughout, between 1,100 and 1,500 c.c. per 24 hours.

On the third hospital day all vomiting had ceased, the patient's blood pressure was stable, and an oral intake of fluid and foods was possible. An upper G.I. series was essentially normal for any esophageal varices or gastric or duodenal lesions. The hemogram and serum bilirubin remained unchanged and the SGOT dropped to 17. The blood sugar was now 154 mg. and the urea nitrogen 84 mg.

By the ninth hospital day the urea nitrogen was 40 mg., and the bilirubin 3.4 mg. (direct 1.4 and indirect 2.0). The prothrombin time was 100 per cent of normal activity, and steady clinical improvement was noted.

The patient had remained afebrile during the entire hospital admission.

A liver biopsy on the ninth day of hospitalization revealed "good presentation of hepatic parenchyma. Here and there occasional clusters of epithelial cells reveal definite evidence of balloonization and extreme vacuolization of the cytoplasm, and many of these cells reveal double nuclei. There is also bile stasis in the midzone of the hepatic lobules. The portal areas are not too remarkable. These features are compatible with hepatocellular and cholestatic jaundice."

The patient made a steady recovery with complete recession of the hepatomegaly and hyperbilirubinemia by the day of discharge, his nineteenth hospital day. The bromsulfalein test on discharge showed 9 per cent retention in 30 minutes, and the urea nitrogen was 21 mg. The patient has remained asymptomatic up to the present, 3 years following his illness.

Discussion

This case report of liver toxicity from tolbutamide is significant because it represents only the second report of its kind from a drug which has been relatively nontoxic in all regards over a span of many patient years. Great pains were taken to substantiate this patient's contention that he was not an alcoholic nor that he had experienced any previous liver disease. The most unusual facet was the relatively long interval (2 years) between the onset of liver decompensation and the initial use of tolbutamide. The only previous report of the kind was that of Baird and Hull.[1] However, their patient received a much larger daily dose of tolbutamide and developed jaundice within an interval of about 3 months.

Tolbutamide is a relatively safe drug, free of most major toxic symptoms, and beset with only a few of the minor toxicities, i.e., urticarial rashes, transient leukopenia, and minor gastrointestinal symptoms. Rarely is this drug discontinued for reasons other than its failure of action, primary failures occurring in 44 of 200 patients and secondary failures in 72 others, according to a 5-year study by DeLawter and Moss.[2] Several reports of nephrosis developing from tolbutamide have been cited[3, 4, 5] and 1 case of acute thrombocytopenia which responded to withdrawal of the drug was seen by me.

According to Moore[4] tolbutamide is a sulfonylurea derivative which is almost completely absorbed by the small intestine with slow excretion in the urine. Significant blood levels may be maintained for as long as 24 hours after a single dose, but approximately 75 per cent of a given dose is excreted in the urine within a 24-hour period. It is excreted as a harmless, metabolically inactive, carboxylated derivative. The urinary metabolite is highly soluble in acid urine, and hence the possibility of crystalluria is eliminated. The tolbutamide excretory product is approximately 200 times more soluble at the same urinary pH than most of the soluble sulfonamide drugs used.

Summary

A 50-year-old man developed cholestatic jaundice, shock, and liver decompensation as a result of 2 years of continuous tolbutamide therapy. The liver status returned to normalcy following the disuse of the drug. This represents an unusual toxicity to a very useful drug but a reaction to which all who treat diabetes with oral agents must be aware.

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PRESIDENT'S PAGE

MENE MENE TEKEL UPHARSIN

And the moving finger having writ, moved on. "Thou art weighed in the balances and art found wanting." There is more to the quotation from Herodotus, but just how different basically is our situation from that of Babylon at the time of the feast of Belshazzar, with Cyrus and his Persian host ominously near? As dimly seen, Babylon must have been decadent politically and morally, but this discussion has not to do with morals.

While not trying to be a Daniel, one cannot help wishing such a prophet would appear to shake thousands of our colleagues out of their political somnambulance. The withdrawal of the average M.D. from his birthright of political potential is disturbing. Unperturbed by the examples of Britain and Saskatchewan, he plods his unenlightened way politically with a sanctimonious grimace of distaste for politicians.

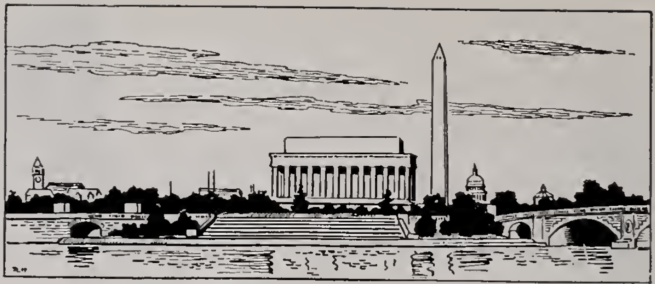
The forces at work designed to further convert our lives socialistically stalk the land. Legislation of the King-Anderson type is simply an entering wedge. What follows will go far beyond medical care if it is not checked. Proponents of this radical trend have picked medicine as the point of attack. We can expect a major effort during the 1964 election year to fasten some legislation, such as the universal Social Security payment for medical care, upon this people—us, that is.

The propaganda machine has already begun to emit stepped-up programmed instruction in an effort to brainwash enough undiscerning constituents to accomplish its socialistic purpose. Virulent attacks upon medical organizations by certain officials of the administration and irresponsible statements by some uninformed, elected representatives in Congress have increased.

This, however, is politics as practiced in our form of republic, and we must recognize it for what it is. We must take our feelings off our sleeves since we are dealing with hard-nosed adversaries and take a positive stand on basic issues. If we wait until the ground is cut from beneath us to bleat, we are lost. If you think you cannot actively engage in politics you are delinquent. Many will say, "I have no vote," but they can contribute to political campaigns without embarrassing their budgets. A number of wives of M.D.'s are very active in precinct work and this should be encouraged. Letters should be written, by those of us who have political representation, to our Congressmen and Senators instead of sounding off at social functions where no one listens anyway.

In summary, doctors of medicine, you are men and women of the people and your strength derives from them. They will ultimately have what they want from you. What they want, however, will to an incalculable extent depend upon the image and impact you create.

K C Corley



EDITORIALS

The Davidson Message

The Reverend Richard K. Young, one of the two lecturers who occupied the podium during the Third Annual Davidson Lecture on Religion and Medicine, October 30, closed the meeting with a pertinent admonition, "Don't talk religion; live it!" This was his reply, given during the Question-and-Answer Period, when someone asked how a busy GP, for instance, could inspire his patients to better living during the brief time allotted per visit. ¶

Christmas is one season of the year when we talk religion—by repeating that beautiful Christmas story as told in the second chapter of Luke. We sing religion—by rendering the old but always new Christmas carols over the sound waves around the world. We give religion—through such an enormous outpouring of gifts the magnitude of which can only be guessed at, but the loss of which would cripple our national economy. I suspect that sometime during that joyful season each one of us lives religion, if only for an hour or a day.

But the challenge the Reverend Young threw out to physicians, and he meant it, I am sure, for all men and women of good will, is to live religion the day after Christmas, the week afterward and the year following. It constitutes a felicitous 1963 Davidson Message for year-round living.

A. L. E.

Dr. White's Recollections

Those colleagues and lay friends of Dr. Charles Stanley White, Sr. who received a copy of his privately published "Surgical Interlude: Recollections and Reflections" early in October must have been as surprised and delighted as this recipient. These recollections begin at the turn of the century when the author was completing his medical studies at George Washington (then Columbian) University night classes.

Dr. White has lived and pursued his career entirely in Washington except for a year of study in New York and for short courses taken in Boston and Chicago. The places he speaks of are mostly in downtown Washington and within a few blocks of the Washington Medical Center, of which he himself was one of the principal developers. He still maintains his office at the Center, adjacent to Doctors Hospital, another monument to his foresight in bringing patients and doctors together for better and more expeditious care. He recalls the beginnings of Group Hospitalization in the early '30s and later Medical Service of the District of Columbia, to both of which he gave ardent support.

The book is not historical and historians will lament that fact. He cites few dates. He relates a number of delightful anecdotes but he does not elaborate on many important events which could have made interesting reading. He recalls many notable figures in medicine and some of their contributions to medicine and surgery but, with the exception of Dr. Hertzler, author of "The Horse and Buggy Doctor," he does not bring them to life so the reader can feel that he knows them too. Dr. White has written on many subjects and contributed much to the literature

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

but he brushes lightly over his own writings. He does devote a paragraph to how he and a co-author secluded themselves in order to complete a book on "Plasma and Blood Substitutes."

However, Dr. White did not intend this book to be historical. In his preface he says he is sitting down "with companions before a beaming fire" on just such an early October evening as Washingtonians delight in and is recalling events and happenings from his life as they occur to him.

Dr. White has maintained his youthful vigor and enthusiasms long past his contemporaries. I do not believe he finds it easy to look back; he is too busy looking forward. This is the feeling the book gave me and thus it reveals the most outstanding trait of the remarkable physician who wrote it.

A. L. E.

D.C. Consultants to JAMA

"Day after day, *The Journal* turns to leading practitioners, scientists, and educators for guidance in the selection of manuscripts for publication. The primary objective is to gain for *Journal* readers the benefits of sound medical reporting in a day when valid observation and clear presentation are vital to the furtherance of modern medicine. The value of this service has become increasingly apparent. When consultants are satisfied and/or enthusiastic about a manuscript, an important step has been taken in final evaluation by the editorial staff. And when the comment is unfavorable, it may signal a critical 'second look.' "

The above quotation is taken from an editorial in the October 26 issue of *The Journal of the American Medical Association*. Further on it gives typical queries which are directed to consultants when asked to review manuscripts for the editorial staff and justifies such a procedure with the homely aphorism that "two heads are better than one."

In the same issue of *The Journal* are listed the names of the JAMA consultants for 1962. The Editorial Board of the MEDICAL ANNALS is proud to note that the D. C. Medical Society has contributed 12 erudite "heads" to that list. They are: Drs. Frank B. Berry, Brian B. Blades, John Boyd Coates, Jr., Paul E. di Sant'Agnese, Charles A. Hufnagel, John F. Maher, Thomas W. Mattingly, William P. McKelway, W. K. Myers, Desmond O'Doherty, John L. Parks, and George E. Schreiner.

Their reward, so consistent with remunerations for similar contributions, is "in the spirit of accomplishment, and may they continue in patience and service."

Ninth National Conference on Physicians and Schools

THE NINTH NATIONAL CONFERENCE ON PHYSICIANS AND SCHOOLS was held in Chicago, October 10, 11 and 12, 1963, under the sponsorship of the American Medical Association. Those in attendance represented departments of education, health education, and public health of cities, states, and universities; voluntary health agencies; and city and state medical societies.

There were greetings from the American Medical Association with responses from the National Education Association and the American Public Health Association. Guest speakers from the American Academy of Pediatrics spoke on such subjects as Physical Health Needs, Mental Health Needs, and Health Education Needs of children.

Representatives of 6 areas of the country discussed the methods that had been used for the development of programs in those areas, utilizing the many community resources available for the teaching of health to the school child. It is important to note that the private physician and the local or State Medical Association was considered an important part of the team. Programs developed and presented by the doctors and medical schools formed the nucleus of at least 2 of these programs.

Much time was given over to the discussion groups, which involved all of those in attendance (20 groups of about 10 to 12 members each). Two principal topics were discussed from the viewpoint of the physician and the educator (teachers as well as administrators). The first topic was "Health and Education Needs," in which there was an effort to define the position of health education, the qualifications needed by the health educator, the need for and the importance of this subject in the curriculum, and appropriate subject matter to be presented to the pupils at various grade levels. (Professors of health education at the university level and directors of programs of health education in state and local educational systems were present as members of the discussion groups.)

The second general topic was "Building Better Relationships." There were much deliberation and discussion by physicians, administrators, educators, nurses, and others relating to interdisciplinary understanding and mutual respect. This facet of "Better Relationships" occupied much more of the time than did the idea of better community relationships (i.e., parent and lay groups) although they were brought into the positive thinking.

Those who had attended previous conferences in the series indicated that there was much more relaxed and frank discussion between the various professional groups at this one than there had been at any of the previous sessions.

General summaries of all of the panel discussions are being prepared by Dr. J. L. Reichert, pediatrician, and by Mrs. Rollin Brown, lay member, who is from the National Foundation office. This report will be printed for distribution later and should be an important contribution to the many groups represented.

Hugh G. Clark, M.D.
Representing the Medical Society of the District of Columbia

Health Dept. Notes

Venereal Disease

VD continues on the rise in the District of Columbia, particularly in the case of primary and secondary syphilis. Furthermore, reported cases underestimate the true picture of the disease. This is shown clearly by a national study carried out by the American Social Hygiene Association. More than 1,000 practicing physicians in D. C. responded to a questionnaire from the Association. Sixty-one of those physicians indicated that they were treating a total of 165 cases of primary and secondary syphilis. During the same period, however, only 25 cases were reported to the D. C. Department of Public Health.

We are currently preparing a paper on the VD problem in the District of Columbia for possible insertion in a future issue of the Medical Annals.

Influenza

While it doesn't appear that this year will produce a high incidence of influenza, we are recommending 2 injections of polyvalent influenza vaccine approximately a month apart, and a yearly booster injection during the fall season in order to provide some protection against this disease.

Vaccination is especially recommended for "high risk" groups, including the aged, persons with cardiac, respiratory or metabolic diseases, and pregnant women. Persons allergic to egg yolk should not receive the influenza vaccine.

Civil Rights March

It would appear timely to express our appreciation for the assistance afforded us by the Medical Society in helping develop and supply medical and public health services in connection with the Civil Rights March of August 28. In addition to 350 beds at D. C. General Hospital being placed in a state of readiness and other hospitals in the District of Columbia being urged to be prepared for emergency cases, 25 first-aid stations were established, and physicians, nurses and first-aid personnel were assigned. We also had an important role to play in the provision of ambulance service and in the provision of drinking water and toilet facilities. It may be of interest to note that 2,164 patients were seen at first-aid stations during that day and 86 patients were sent to hospitals. Only 8 were actually admitted.

Vaccination Program

We were recently notified that we were awarded a grant by the U. S. Public Health Service under the "Vaccination Assistance Act." As a result of the grant and in close coördination with the Medical Society, we are planning to do a study aimed at determining the present level of immunization against diphtheria, pertussis, tetanus and polio. Subsequently we are hopeful of developing a community-wide immunization program, to be followed by a second study aimed at learning to what extent the program has been successful at raising the immunization level. This program was previously discussed at some length with the Society's Public Health Committee and received the endorsement of the Society.

Murray Grant, M.D., D.P.H.
D. C. Director of Public Health

Proceedings of the Annual Business Meeting

The Annual Business Meeting of the Medical Society of the District of Columbia was called to order by Dr. Karl C. Corley, President, on Sunday, November 10, 1963, at 5:10 p.m. Dr. Corley, in his opening remarks, expressed appreciation to the officers and committee members for their coöperation during his tenure and urged that the incoming President, Dr. Edward W. Nicklas, be given the same support in 1964.

In Memoriam to Deceased Members

Dr. Corley, Chairman, asked for all present to rise and remain standing during his reading of the names of members who had died since the last Annual Business Meeting. They are:

Avery, Frederick S. (Life)—January 16, 1963
Behrend, Edwin B. (Life)—February 26, 1963
Bloomberg, Max W. (Associate)—December 20, 1962
Branham, Sara E. (Associate)—November 17, 1962
Brooks, J. Lester (Life)—January 31, 1963
Buckingham, David E., V.M.D. (Associate)—November 5, 1963
Copeland, Edgar P. (Life)—November 21, 1962
Doland, Alger B. (Active)—January 23, 1963
Fales, Ella R. (Associate)—January 10, 1963
Griffin, Thomas E. (Active)—April 16, 1963
Grisoff, Isaac S. (Active)—November 1, 1963
Hertzberg, Herman (Active)—July 9, 1963
Jones, Leslie M. (Associate)—March 2, 1963
Kane, James P. (Active)—May 31, 1963
Kerr, Harry H. (Life)—August 31, 1963
Langenstrass, Karl H. (Active)—October 5, 1962
Lowry, Sidney W. (Associate)—March 2, 1963
Martyn, Herbert E., Sr. (Life)—November 17, 1962
Meloy, William C. (Active)—March 15, 1963
Olinick, Yvonne Van der Reyden (Associate)—March 30, 1963
Perry, John S. (Active)—November 14, 1962
Phillips, Herbert L. (Associate)—February 4, 1963
Pickford, Edward M. (Associate)—March 25, 1963
Schwartz, Louis (Active)—February 25, 1963
Sheldon, Luther (Active)—June 22, 1963
Stovall, William R. (Active)—September 18, 1963
Strine, Howard F. (Life)—December 6, 1962
Towner, Frank H. (Active)—February 18, 1962
Wilkins, Warren S. (Active)—December 29, 1962

Annual Reports of the Executive Board, the Board of Credentials, and the Secretary-Treasurer

Since these reports were published in the October issue of the Medical Annals, pages 418–424, Dr. Corley accepted their adoption on a motion, duly made and seconded.

Supplementary Report of the Chairman of the Executive Board

Dr. W. LeRoy Dunn read his Supplementary Report, which summarized actions of the Board subsequent to publication of the Annual Report in the Medical Annals. The report is published in full following these proceedings.

Following each recommendation in his report, Dr. Dunn moved its adoption. After a second to the motion, Dr. Corley asked for discussion and a vote.

Amendments IX, X, XI and XIII were adopted without discussion or change. Amendment XII was adopted as amended by Dr. Ammerman, changing "Section 17. Neurological Surgery" to "Section 17. Neurology and Neurological Surgery" and deleting "Neurology" from Section 2 so that it now reads "Psychiatry."

The proposed budget for 1964 was approved unanimously.

The nomination of Dr. Jack Kleh to succeed Dr. Nicklas for a 3-year term on the Board of Trustees of the Medical Service of D. C. received unanimous approval. This also applied to Dr. O. Hugh Fulcher, who was nominated to succeed himself for a 5-year term on the Board of Trustees of Group Hospitalization, Inc.

That portion of the Chairman's report concerned with the sale of 1710–1718 M Street and the acquisition of new property was approved with 2 dissenting votes.

Dr. Joseph Hamilton McNinch, Chief Medical Director of the Veterans Administration, was elected to Honorary membership in the Society.

On a motion by Dr. Dunn, duly seconded, his Supplementary Report as a whole was adopted as corrected.

Election of Officers

In the absence of Dr. Preston A. McLendon, the report of the Nominating Committee was read by Dr. Samuel Dessoff. The following nominees, presented by the Chairman, were elected to office:

President-elect: Paul R. Wilner
First Vice President: Josephine E. Renshaw
Second Vice President: Harold M. Hobart
Member of Executive Board for a 4-year term: Karl C. Corley
Members of Board of Credentials: Michael J. McInerney (3-year term); Philip R. James (3-year

term); Leslie E. Hedgepath (2-year term); Louis J. Goffredi (1-year term)

Delegate to AMA for a 2-year term: C. Willard Camalier, Jr.

Alternate Delegate to AMA for a 2-year term: Thomas M. Peery

The Secretary was instructed to cast a unanimous ballot for all nominees.

Introduction of New Officers

The Chairman introduced the newly elected officers who were present and called upon the President-elect, Dr. Wilner (escorted by Dr. Camalier), and the incoming President, Dr. Nicklas (escorted by Dr. Herbert S. Gates), to come to the podium for a few words. Both Dr. Wilner and Dr. Nicklas spoke briefly, assuring the members of their support of Society activities and requesting the coöperation of all members.

Election of Members

The members present confirmed the election of 64 Active, 23 Associate, 2 Affiliate, and 5 Resident-Intern members who had been elected for a year's probationary period by the Executive Board, thus declaring them eligible for full membership privileges.

Presentation of Gavel to Outgoing President

Dr. Dunn assumed the Chairman's position to present an inscribed gavel to Dr. Corley, who is completing his year as President, December 31, 1963.

Presentation of Certificate of Appreciation

Dr. Corley presented Dr. J. Spencer Dryden, last year's President, with a Certificate of Appreciation from the Society for his untiring work during 1962.

Other Business

The Chairman called for any other items of business. Dr. Frederick Y. Donn was recognized and moved that to further greater interest and participation by Society members 4 business meetings of the Society be held each year. The motion was seconded, and after brief discussion an amendment was proposed by Dr. Leland E. Stevenson, seconded by Dr. Zigmond M. Lebensohn. The second was withdrawn, however, with the approval of Dr. Lebensohn, and a vote on the original motion called for. Following a brief discussion in which it was pointed out that the Executive Board had authority to call special Society meetings whenever it is necessary, the Chairman called for a vote. The motion was defeated by an overwhelming vote.

There being no further business the meeting adjourned and the members were invited to partake of refreshments in the Library.

Supplemental Report of the Chairman of the Executive Board

THIS HAS BEEN A BUSY YEAR for the Executive Board. In addition to the routine work and the usual problems which arise, the sale of 1710–1718 M Street and the search for a suitable site for a new Society Building have and are taking much time and thought.

As you know, the Executive Board is composed of 4 elected members, each serving a term of 4 years, and the President, the President-elect, and the Senior Delegate to the House of Delegates of the AMA *ex officiis*. Some members of the Society look upon the Executive Board as a hierarchy which "runs" the Society. To a limited extent this is true, for some small group must be given authority to carry on the business of the Society. The Board's decisions and actions, however, are subject to the approval of the membership; all matters pertaining to policy must be referred to the Society for its action. Any Active or Life member may request an appearance before the Board to discuss a particular problem or to protest a decision of the Board, and some do.

As its Chairman I assure you that the present Board is the hardest working group I have seen in the more than 6 years I have served. They have worked hard, conscientiously, and willingly for long hours in regular and special meetings in order to give the affairs of the Society proper consideration and study.

A summary of the activities of the Executive Board has been published in the October issue of the ANNALS. The present report deals with matters requiring the attention of the Society which were not included in the published report. There is much business to be transacted tonight so I shall proceed immediately to the items listed in the agenda.

1. First, we have before us recommendations for revisions in the Constitution and By-laws. Five amendments are proposed at this time; the

Committee on Constitution and By-laws will consider other major revisions during the forthcoming year.

Amendment IX

It is proposed that a new classification for "Special Members" be added to Chapter II, thereby making 7 classes of membership.

> "Special members shall be Active members who by reason of retirement or disability are no longer in the practice of medicine. Special members shall have all privileges of the Society including the right to vote and hold office. They shall be subject to its discipline and pay such dues (not assessments) as may be imposed by the Society."

This new class of membership would become Article VIII of Chapter II, with present Article VIII becoming Article IX.

To provide for the dues for this new classification it is proposed that Chapter IV, Article I be amended to add:

> "Section 6. Special members shall pay dues of $10 annually."

Amendment X

It is proposed that the First Vice President, the Second Vice President, and the Junior Delegate be made *ex officiis* members of the Executive Board, with the right to vote.

Chapter V, Article I, Section 3 would be amended to read as follows:

> "The President-elect, First Vice President, and Second Vice President shall be members *ex officiis* of the Executive Board."

Chapter V, Article I, Section 7 would be amended to read as follows:

> "The Delegates to the House of Delegates of the American Medical Association, or Alternate Delegates if one or both Delegates are unable to serve, shall attend the sessions of the House of Delegates of the American Medical Association as the accredited representatives of this Society, and shall report thereon to the Society. The Delegates to the House of Delegates of the American Medical Association shall be members *ex officiis* of the Executive Board. Seniority of Delegates shall be determined by date of election or by the largest number of votes received if elected simultaneously."

Chapter VII, Article I would be amended to read as follows:

> "The Executive Board shall consist of the President, the President-elect, First Vice President, Second Vice President, and Delegates to the American Medical Association (all *ex officiis*) and four elective members, one of whom shall be elected at the Annual Business Meeting of the Society each year, to hold office for a term of four years. In the event of a vacancy among the four elective members, the vacancy shall be filled by the Executive Board until election for the remainder of the term by the Society at its Annual Meeting. The Secretary of the Society shall be *ex officio* Secretary to the Executive Board without vote. Six members of the Executive Board shall constitute a quorum for the transaction of business."

Amendment XI

It is proposed that the membership of the Board of Credentials be increased from 3 to 6 members. Therefore, Chapter VIII, Article I would be amended to read as follows:

> "There shall be elected at the Annual Business Meeting of the Society a Board of Credentials consisting of six Active, Life, or special members, two of whom shall be elected each year for terms of three years. The The Board shall perform the duties as outlined in Chapter II, Article IX."*

For the first year, 1 member would be elected for 1 year, 1 for 2 years, and 1 for 3 years.

Amendment XII

In response to a formal request and in accord with the Constitution and By-laws it is proposed that Chapter X, Article II be amended to add the following:

> "Section 18. 'Neurology and Neurological Surgery,' thereby adding a new Section to those now in existence and to delete the words 'Neurosurgery and Neurology' from Section 2 of this same article so that it will read 'Psychiatry.' "*

Amendment XIII

It is proposed that in the fifth line of Chapter V, Article I, Section 6, the words "Consisting of two voting members and the Treasurer" be deleted and the following substituted (re Finance Committee):

> "Consisting of at least two voting members and the Treasurer."

2. The second item for this report is the Proposed Budget for 1964 (see page 519). I shall just comment briefly on it.

The estimated income from dues is practically the same as has been received over the past several years. There seems to be no indication that dues income will grow since Active membership shows no evidence of substantial increase. This means that our Society programs cannot be expanded without cutting elsewhere.

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* As amended and adopted.

The number of staff members has already been reduced and various labor-saving ideas are being explored. How successful we shall be remains to be seen.

ASSEMBLY income remains about the same, too, and its future depends on how well our membership attends the exhibits next week. We can't expect the Technical Exhibitors to finance our ASSEMBLY without our support. If you wish to continue the SCIENTIFIC ASSEMBLY, you should attend and visit each exhibit.

The MEDICAL ANNALS income from pharmaceutical advertising continues to drop. This is handled through the State Medical Journal Advertising Bureau in Chicago, so we have no control over it. Whether this reduction is due to the hearings in Congress and unnecessary restrictions of the Federal Drug Administration is a moot question but there seems to be a direct connection. Expenses have been reduced by some $7,000 through printing changes and a reduction in the number of pages but are still greater than income. Further changes are being considered for next year.

The Medical Bureau Committee has made major changes in the BUREAU operations designed to improve service to members. These changes were accompanied by an increase in charges and will keep the BUREAU in the black.

The operation of our rental space at 1710 M Street is not a profitable one but is necessary since we use a portion of the building for Society offices, including the BUREAU.

We anticipate remaining within the estimated budget and expect to have a small balance. Compared to other medical societies, this Society is rich in land and poor in dollars. Our reserve is below that considered reasonable and necessary, but as long as we keep a careful eye on income and expense we shall probably not require any assessment.

3. The third item in the report is the nomination of a member to the Board of Trustees of Medical Service for a 3-year term.

The Executive Board submits the following nomination: Dr. Jack Kleh to succeed Dr. Edward W. Nicklas.

4. The fourth item is the nomination of a member to the Board of Trustees of Group Hospitalization, Inc. for a term of 5 years.

The Executive Board submits the following nomination: Dr. O. Hugh Fulcher to succeed himself.

5. The fifth item in this report concerns the sale of 1710–1718 M Street and the acquisition of new property.

At a Special Membership Meeting of the Society on Monday, May 20, 1963 the Executive Board was given the authority to:

a. Negotiate the sale of the present property at 1710–1718 M Street, N.W., and,

b. Negotiate the purchase of another property, within reasonable distance of and less expensive than the present site, for the purpose of constructing a single-purpose Medical Society building.

The Executive Board has proceeded to follow these 2 directives. A summary of the activities to date was sent to all Active and Life members on October 24 to acquaint them with the status of our negotiations. This property (1710–1718 M Street, N.W.) has been sold for $1,000,000. Options have been exercised on property on Eye Street at less than half the cost in dollars received from our present property. However, the Executive Board is still open to suggestions as to a better location.

It is our hope to begin the new headquarters in the spring of 1964. Obviously, everyone will not be satisfied regardless of what is done, but the Executive Board assures each member that its actions will be for what is believed to be in the best interest of the Society as a whole. For a long time we have needed a new building with good meeting and staff facilities. The opportunity to accomplish this is here; let's all coöperate to facilitate the project.

6. At this time it gives me great pleasure, upon the recommendation of the Executive Board, to propose Dr. Joseph Hamilton McNinch, Chief Medical Director of the Veterans Administration, for Honorary membership.

7. Finally, a few other items merit brief mention.

One of the most difficult problems which confront the Board is keeping the members of the Society advised as to the work of the committees and the actions of the Board. This has been partially solved by including a brief summary of these activities in each issue of the ANNALS. Although these reports are not complete they supply much important information. I urge you to read them.

Several provisions of the Constitution and By-laws should be reviewed. As noted in the Chairman's published report, the committee structure of the Society is not suited to its present needs. A study of this was started several months ago and is not completed. There has been some confusion as to types of membership and the lack of a suitable category for disabled or retired members. The Board of Credentials has been handicapped by the simultaneous illness of 2 of its 3 members. To many it seems desirable to increase the membership of the Executive Board from 7 to 10 by including the First and Second Vice Presidents and the Junior Delegate to the AMA as *ex officiis* members. The proposed amendments to the Constitution and By-laws should help solve some of these problems. But others remain. Much thought and discussion must follow before additional recommendations can be made to the Society.

Then there are the perennial problems of the cost of medical care, care for the aged, prepaid health insurance, public health policies, Workmen's Compensation insurance, the Relative Value Schedule, and many others which will continue to occupy the attention of the Society.

The Society is deeply indebted to the chairmen and members of the several committees for the time, enthusiasm, and effort that have characterized their performance. Without their devotion to the duties assigned them the Society would not be able to function satisfactorily. With a more efficient organization and a better grouping of committees their efforts should produce even better results.

The next year will be a crucial one for the Society. A site for the new building must be selected, the building planned and constructed, and appropriate equipment installed. The Society building should be—it once was—the center of medical activities in the community. With proper planning and selection the new location and building can be made convenient and attractive for meetings of the smaller societies and Sections of this Society, so that once more the Medical Society building will be the center of medical activities in this community. It can be done if the members want it and are willing to make the necessary effort.

Respectfully submitted,
W. LeRoy Dunn, M.D., *Chairman*

DR. KATHARINE A. CHAPMAN was named "Family Doctor of the Year" by the Maryland Academy of General Practice, October 12. Dr. Chapman has practiced medicine in Kensington, Md., since 1926 and has been an Associate member of the D. C. Medical Society since 1928.

Proposed Budget 1964

INCOME:		
Membership Dues	$113,725.00	
Other Income:		
Annual Scientific Assembly	14,000.00	
Medical Annals Advertising	37,100.00	
Medical Bureau	136,000.00	
Rent—1710 M Street	8,000.00	
Interest on Savings	1,800.00	
Miscellaneous	500.00	
TOTAL INCOME		$311,125.00
EXPENSES:		
Office Staffing	$64,000.00	
Society Programs	27,450.00	
Building Maintenance	8,900.00	
Office Operations	12,250.00	
1710 M Street	9,550.00	
Medical Annals	49,400.00	
Medical Bureau	133,250.00	
TOTAL EXPENSES		$304,800.00
Excess of Income over Expenses		6,325.00
Transfer to Building Fund		3,000.00
NET EXCESS OF INCOME OVER EXPENSES		$3,325.00

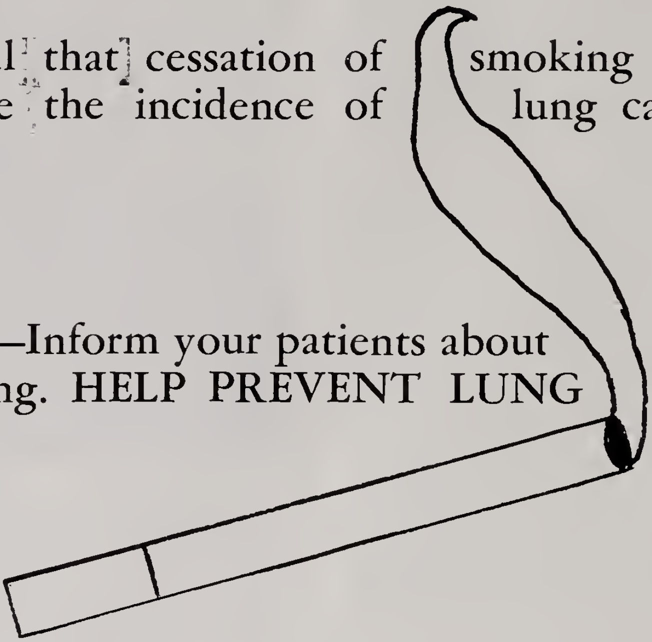
DOCTOR!!!

Carcinoma of the lung is the most common form of cancer in males today. Moreover, there is an increasing incidence among female smokers.

In males it is the *leading cause of death* from malignant neoplasms.

Studies reveal that cessation of smoking would markedly decrease the incidence of lung cancer.

REMEMBER—Inform your patients about the grave danger of smoking. HELP PREVENT LUNG CANCER.

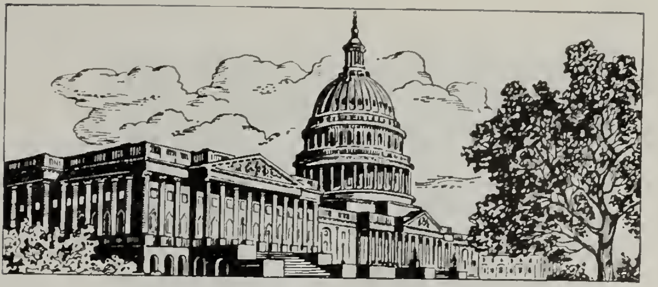


A film: "Lung Cancer: The Problem of Early Diagnosis" is available for showing to physicians.

RESEARCH
EDUCATION
SERVICE

Call or Write

American Cancer Society
District of Columbia Division, Inc.
810 18th Street, N.W.
Washington 6, D.C.
EXecutive 3-3690



NEWS & PERSONALS

Boards & Committees

Dr. W. LeRoy Dunn, Chairman, presided at the regular meeting of the **Executive Board of the Medical Society of the District of Columbia,** October 28, 1963. Present were Drs. Victor R. Alfaro, Karl C. Corley, J. Spencer Dryden, Raymond T. Holden, Edward W. Nicklas, Duane C. Richtmeyer, J. Rogers Young, and Mr. George W. Cooley, Secretary. Also present were Drs. Grace H. Guin and C. Willard Camalier, Jr. Present as guests were Dr. James E. Chapman and Mr. J. P. Stedehouder, the latter of Central Charge Service. The Chairman called the meeting to order at 7:40 p.m.

Committee Meetings

The Secretary reported the following committee meetings held since the Board last met:

October 11	House Committee
14	Journal Exchange Committee
15	Grievance Committee
16	Board of Credentials
23	Committee on Medical Ethics and Professional Conduct

Board of Credentials

The following applicants for membership recommended by the Board of Credentials were approved:

Active Members

Richard Vernon Erkenbeck, 730 24th Street, N.W.
Edward Coleman Kirby, 1401 Monroe Street, N.W.
Donald Gerald Levitt, 10412 Rockville Pike, Bethesda, Md.
Samuel Q. Mitchell, Freedmen's Hospital
Robert Beverly Point, 1712 Eye Street, N.W.
Neofytos Theodore Tsangaris, George Washington University Hospital
Herbert Winston, 6302 West Halbert Road, Bannockburn, Md.

Associate Members

Felix Flores, 402 Main Street, Laurel, Md.
Maud J. Peereboom, Georgetown University Hospital
David McK. Rioch, Walter Reed General Hospital
Wai Lin Wong, 3239 Davenport Street, N.W.

Affiliate Member

Harold John Berman, 312 South Washington Street, Alexandria, Va.

Resident-Intern Member

John LeRoy Fox, George Washington University Hospital

The following changes in membership were approved:

Affiliate to Active: Walter F. Cresswell, Jr.
Resignations: Raphael I. Soll and Albert S. Winer
Reinstated to Active: George J. Cardany

House Committee

A progress report was made on the building site selection and a decision made to interview several architects prior to a specific selection.

Committee on Constitution and By-laws

Proposed revisions to the Constitution and By-laws were agreed upon, to be submitted to the membership at the Annual Business Meeting.

Finance Committee

The report of this Committee on income and expenses for the third quarter was approved. The Committee's recommendation to lease a new Smith-Corona Duplicating Machine was accepted. Changes in the bookkeeping system, recommended by Professional Business Management, Inc., were agreed upon and the Executive Director authorized to install them for 1964.

Central Charge Service

Dr. Chapman and Mr. Stedehouder appeared before the Board to provide data on and to explain the operations of "Medical-Dental," a project of Central Charge Service. The Board voted that the President "establish an ad hoc committee to study the Medical-Dental Plan of Central Charge Service and to formulate ground rules or guidelines for the operation of such organizations under which Society members might participate without adversely affecting the patient or the relationship between the physician and the patient."

Resolution to Be Presented at AMA Meeting

The Board instructed the Society's delegates to submit the following resolution concerning voluntary contributions to house staff funds to the AMA House of Delegates during the Portland Session.* Dr. Camalier was asked to introduce the resolution on behalf of the Medical Society.

WHEREAS, This House of Delegates has agreed that the "intern and resident should receive financial support commensurate with his professional responsibilities and with due recognition of his educational opportunities," and

WHEREAS, The Hospital corporate body cannot be relieved of its responsibility for sharing in the cost of maintaining intern and resident programs, and

WHEREAS, This House of Delegates has recommended that "the medical profession must assume an increasing responsibility for the development of appropriate financial support of the intern and resident," and

WHEREAS, This House of Delegates has on several occasions reiterated its opposition to compulsory contributions or assessments levied on the medical staff of hospitals, and

WHEREAS, This House of Delegates has steadfastly favored voluntary efforts by physicians to promote or accomplish worthy objectives, and

WHEREAS, The American Medical Association has urged physicians to voluntarily contribute to a fund to assist medical students, and

WHEREAS, It cannot, therefore, be contrary to The Principles of Medical Ethics for a physician to voluntarily contribute to a fund to assist interns and residents in training; *therefore be it*

Resolved, That the House of Delegates does hereby rescind the action taken in June 1963 at Atlantic City to the effect that "the AMA record itself as opposed to any system or program by which any part of an intern's or resident's salary is paid out of fees collected by the attending physician or out of fees collected under any type of medical-surgical insurance coverage," thereby enabling any physician who might feel the responsibility of the medical profession to assist in the development of a plan of appropriate financial support of interns and residents to voluntarily contribute to a fund in support of such a plan without acting in a manner contrary to an expressed attitude of the AMA but which is in accordance with his personal rights.

Other Business

Letters from the following organization representatives were read and discussed: Dr. Joseph H. McNinch, Chief Medical Director of the Veterans Administration; Mr. Robert V. Donahoe, Associate Executive Director of United Givers Fund; Dr. Henry G. Hadley of Research Foundation, Inc.; and Dr. John R. Pate of the D. C. Health Department.

Meetings

The American College of Surgeons will hold its first **1964 Sectional Meeting** in Baltimore, January 27–29. Headquarters hotel will be the Lord Baltimore.

An innovation in this meeting will be sessions in the specialties of ophthalmology and obstetrics and gynecology as well as in general surgery. There will be 2 "How I Do It" clinics, the first on problems in general surgery and the second on problems in gynecologic procedures. A number of D. C. Medical Society members will appear on the program.

Dr. Robert J. Coffey will participate in a panel on Gastric and Duodenal Ulceration at the opening morning session, January 27.

Dr. Charles A. Hufnagel will present a paper on "Aortic Valvular Disease" during a Symposium on Recent Advances in Cardiovascular Surgery, Tuesday afternoon, January 28. Dr. Alfred Blalock, of Baltimore, will preside at this Symposium. In a morning session the same day devoted to Ophthalmic Surgery, Dr. J. Harry King, Jr. will present a paper on "Enucleation and Implants."

Dr. Calvin T. Klopp will be a panelist in a Panel Discussion on Chemotherapeutic Agents in the Management of Malignant Disease, Wednesday morning. In the afternoon Dr. Robert H. Barter will participate in one of the "How I Do It" clinics. His presentation will be "Operative Correction of the Incompetent Cervix."

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* Rescinded by action of Executive Board, November 25, 1963.

More than 500 surgeons are expected to attend this scientific meeting, which is also open to all doctors of medicine.

General News

Major General Richard L. Bohannon, MC, USAF, a Texan, became the new **Surgeon General of the Air Force** on December 1. He succeeds Major General Oliver K. Niess, who has served in that capacity for the past 5 years.

A graduate of Baylor University College of Medicine (Class of 1932), Dr. Bohannon was called to active duty as a Reserve Medical Officer in the Civilian Conservation Corps in Ithaca, New York, in 1933. In 1936 he left for Fort Jay, New York, and while there received his commission as First Lieutenant in the Regular Army.

After fulfilling a number of assignments in the States, Colonel Bohannon was transferred to foreign duty in 1945 and served in France and later Germany. He returned to the States in 1947. He continued to rise in rank, and by 1958 he was promoted to Brigadier General. At that time he was Surgeon, Fifth Air Force, on overseas duty at Fuchu Air Station, Japan. Three years later, in 1961, he became Deputy Surgeon General of the U. S. Air Force. The same year he was promoted to Major General.

General Bohannon is certified by the American Board of Preventive Medicine (Aviation Medicine). He is a member of the American Medical Association, Aerospace Medical Association, Association of Military Surgeons, and the Civil Aeromedical Association. He is a rated Chief Flight Surgeon.

MAJOR GENERAL RICHARD L. BOHANNON, MC, USAF, new Surgeon General of the Air Force.

A modern aviation medical center was opened officially at National Airport, October 22. Built by United Airlines at a cost of $100,000, the 23-room center will be a combination clinic for its large work force, and a research and diagnostic center for measuring data on the human heart. Dr. John E. Smith, Regional Medical Director of United Airlines, will be in charge of the center. Formerly Director of Medical Research for the Federal Aviation Agency, he is a specialist in cardiovascular diseases.

Dr. Smith plans to use United flight personnel as a "study group" for the controlled research program because of the excellent health data that are available on these men. United has been conducting linear medical studies of its flight personnel since 1938, and the company maintains a complete history of their dietary and exercise habits. Analysis of these data is expected to reveal much about the relationship between an individual's daily life habits and the development of heart disorders.

The medical center is not designed as an emergency accident center for the Airport, although it may be called upon for the use of its facilities in a crisis.

Dr. John G. Ball, of Bethesda, **and Dr. Belden R. Reap, Sr.,** of Wheaton, have been appointed **medical examiners for Montgomery County** by the Maryland Post-Mortem Examiners Commission. They will succeed Dr. Frank J. Broschart, of Gaithersburg, who retired, November 1, after serving as Coroner for 21 years. Dr. Ball is an Associate member of the D. C. Medical Society.

Personals

Dr. Raymond T. Holden, the Medical Society's senior delegate to the American Medical Association, has been appointed by its Board of Trustees to a Task Force on Internships, established by the Council on Medical Education and Hospitals.

Dr. Robert S. Jason, Dean of the College of Medicine, Howard University, was elected to a 2-year term as Director-at-Large of the American Cancer Society. Election took place at its Annual Meeting in New York, October 23. He is a member of the Board of Trustees of the D. C. Division of the American Cancer Society.

Dr. Howard S. Madigan is the Division's Professional Delegate to the National organization.

Dr. William C. Manion, Chief of the Cardiovascular Pathology Section, Armed Forces Institute of Pathology, was cited by the Alumni Association of Catholic University, November 2, for his contributions to the field of medicine. Dr. Manion was one of 10 alumni who received awards for distinctive achievements in various fields of endeavor. The presentations were made at the Association's annual banquet at the Shoreham Hotel, which climaxed the Homecoming Week-end activities and celebrated the 75th year of the founding of the University.

Dr. Seymour Alpert served as a director in the House of Delegates of the American Society of Anesthesiologists at its annual business and scientific meeting, November 2–6, at the Palmer House in Chicago.

Dr. Charles J. Savarese, Jr., of Bethesda, was one of 4 Vice Presidents elected by the Maryland Academy of General Practice to serve during 1963–64. The annual meeting of the organization was held at the International Inn, in Washington, October 12.

Dr. William B. Dolan, of Arlington, Va., an Associate member of the Medical Society, was elected to the Board of Directors of the American Society of Clinical Pathologists at its recent annual meeting in Chicago.

Dr. Paul W. Yost, of Arlington, has been appointed Associate Medical Director for the Prudential Insurance Company's Northeastern home office in Boston.

Dr. Yost received his medical degree from Washington University in 1949. For the past 11 years he has been associated with the American Red Cross, serving on special assignments in Austria, Poland, Yugoslavia, and India. His offices will be in the Prudential headquarters in Boston.

Dr. R. Frank Jones, Medical Director of Freedmen's Hospital, is the new Chairman of the District Human Relations Council, an advisory body to the District Commissioners. The Council was recently given expanded jurisdiction to help carry out its policy against discrimination in employment and promotion because of sex or age. Previously the Council had been limited to combating discrimination because of race, religion or national origin.

Dr. James Q. Gant has been appointed Clinical Professor of Dermatology and Syphilology at George Washington University School of Medicine. He has served as Assistant Professor in this Department since 1946.

Dr. Jorge B. Morales, who is Associate Director of the Department of Pathology at Providence Hospital, resigned his position as one of 3 Deputy Coroners in order to devote more time to other professional interests.

Dr. Thomas M. Peery, Chairman of the Department of Pathology at George Washington University School of Medicine, has been elected a member of the Board of Directors of Cooke Engineering Company in Alexandria, Va. Cooke is a developer and manufacturer of electronic and medical equipment.

Five members of the D. C. Medical Society were inducted into fellowship in the American College of Surgeons in San Francisco, October 31. The ceremonies were held during the Semicentennial celebration of the College. The surgeons are **Drs. Jesse B. Barber, William D. Byrne, Peter W. Conrad, Victor H. Esch, and James F. O'Rourke.**

Obituaries

Harry Hyland Kerr, C.M., M.D.

(1881–1963)

On August 31, 1963, death claimed Dr. Harry Hyland Kerr, one of the few remaining pioneer American surgeons, at Nantucket, Massachusetts.

Harry Hyland Kerr was born in Winnipeg, Canada, April 30, 1881, to Scottish parents (by way of Ireland), Dr. James Kerr and Laurie Bell Kerr, who had immigrated to Canada. Dr. Kerr and his young wife settled in Winnipeg where he was Surgeon-in-chief for the Canadian Pacific Railroad. He became a co-founder of the School of Medicine of the University of Manitoba and the first Professor of Surgery in that new medical school. When Harry was six his parents migrated to the United States and settled in Washington, D. C., largely because of the urging of Alexander Graham Bell, a cousin of Mrs. Kerr.

While in Canada Dr. James Kerr had been acquainted with Dr. William Osler, who later moved to Baltimore with the Johns Hopkins University School of Medicine. This friendship was cultivated and blossomed after the Kerrs moved to Washington, because Dr. Osler was frequently called to Washington for consultation. It was during this period that young Harry became acquainted with Dr. Osler, who was to have a great effect upon his life.

For his elementary education Harry attended the public schools of Washington. During his teen age his father had him instructed in the "manly art of self-defense" by a professional boxer, without the knowledge of the mother. Upon completion of his elementary education young Kerr matriculated at the Columbian University (later the George Washington University), and in 1900, at the suggestion of Sir William Osler, he enrolled in the School of Medicine of McGill University in Montreal. As a medical student he achieved certain distinction and fame as a medical artist, as a boxer called "the spider," and as an organizer of the first skiing club in Montreal. Upon graduation from McGill in 1904, Dr. Kerr served internship and residency at the Montreal General and Royal Victoria Hospitals. Upon completion of the 2 years of hospital training his father sent him abroad for a year of surgical experience in England, France and Germany.

In 1907 Dr. Kerr returned to Washington and became associated with his father and Dr. Edward Parker in the practice of surgery. Because of the high mortality associated with intestinal resection at that time, Dr. Parker and young Dr. Kerr, through a series of laboratory investigations in the old Army Medical Museum, devised the basting-suture technique of aseptic intestinal anastomosis, which they reported in the *Johns Hopkins Bulletin* of May 1908. This contribution revolutionized the practice of operative surgery in the preantibiotic days and brought about a great reduction in the mortality usually expected from such operations.

An inquisitive nature and insatiable curiosity were characteristics of Dr. Kerr; he was continually looking for ways and means of improving surgical techniques and of devising methods by which pathologic lesions could be attacked surgically. Ten years before the first successful pneumonectomy was done, he devised and carried out an operation for the removal of a mediastinal tumor approached through a surgical trap-door made in the sternum. In 1917 his interest in the diseases of the central nervous system resulted in his appointment as executive to Dr. Harvey Cushing, who was in charge of neurologic surgery during World War I. On his return to Washington after the War he served as a continuing consultant to the Walter Reed Army Hospital and the Veterans Administration and contributed much to the knowledge of the surgery of the peripheral nerves, their reconstruction and grafting.

HARRY H. KERR, M.D.

Early in his career the George Washington University School of Medicine recognized the talents of this young surgeon and he was made Clinical Professor of Surgery in 1915; in 1919 he became Professor of Neurosurgery, which post he held until 1930. In 1930 he was appointed Clinical Professor of Surgery and held this post until his retirement in 1946.

Dr. Kerr was the first trained neurologic surgeon in the Washington area. During his early years he was attending surgeon at the Providence, Emergency, Children's and Garfield Hospitals.

However, it was at the latter hospital that his continuing interest stayed, and he was on the staff of Garfield Memorial Hospital from 1915 to 1945, serving as Chief of Surgery from 1932 to 1945. He was a guiding genius and a principal organizer of the combination of hospitals which later developed into the great Washington Hospital Center, consisting of Emergency, Episcopal Eye, Ear and Throat, and Garfield Memorial Hospitals, and he was on the emeritus staff of the Hospital Center at the time of his death.

Throughout his life in medicine he had a consuming desire to deal with cancer. He joined with Drs. Edwin Merritt and Lewis Ecker to mold the effort which resulted in establishing the Warwick Memorial Cancer Clinic at the Garfield Memorial Hospital and aided in its later affiliation with the George Washington University School of Medicine. He was a founder, member and first President of the District Chapter of the American Cancer Society.

Because of his personal and professional accomplishments, Dr. Kerr was a member and an honorary member of numerous professional societies, including the American Medical Association, the American College of Surgeons, the American Society of Neurologic Surgeons, the American Surgical Association, the Southern Surgical Association, the District of Columbia Medical Society (President in 1929), and Sigma Xi. He was a member of the Metropolitan Club, the Chevy Chase Country Club, the Alibi Club, and the Alfalfa Club.

On January 1, 1910, Dr. Kerr was married to Dorothy Beatrice Glass, also a native of Winnipeg, Canada. To this union was born one son, Peter, now a headmaster at the Cranbrook School for Boys in Detroit, Michigan.

Dr. Kerr was a dedicated physician, a master surgeon, an enthusiastic teacher, a devoted husband, and a true gentleman. He came to love Nantucket, where he spent the last 20 summers of his life. At his request his ashes were scattered over Nantucket Sound.

Ernest A. Gould, M.D.

Feeding of Solids to Infants—Epps and Jolley

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anorectic-tranquilizer. A third of the women received identical-appearing placebos, but too many discontinued the placebos to permit a comparison with the drug. During 19 to 25 weeks both groups had reduced rate of gain by one-half. And, somewhat surprisingly, the "unwanted" group did as well as the "wanted" group in managing weight but seemed largely unrelieved of emotional stress compared to the "wanted" group.

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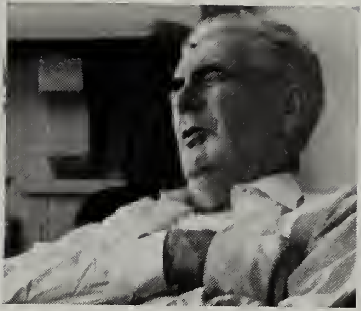
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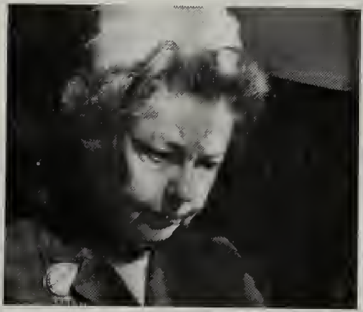
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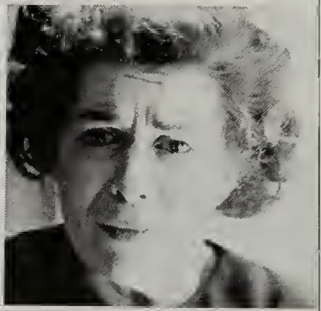
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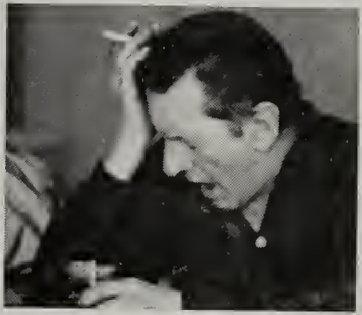
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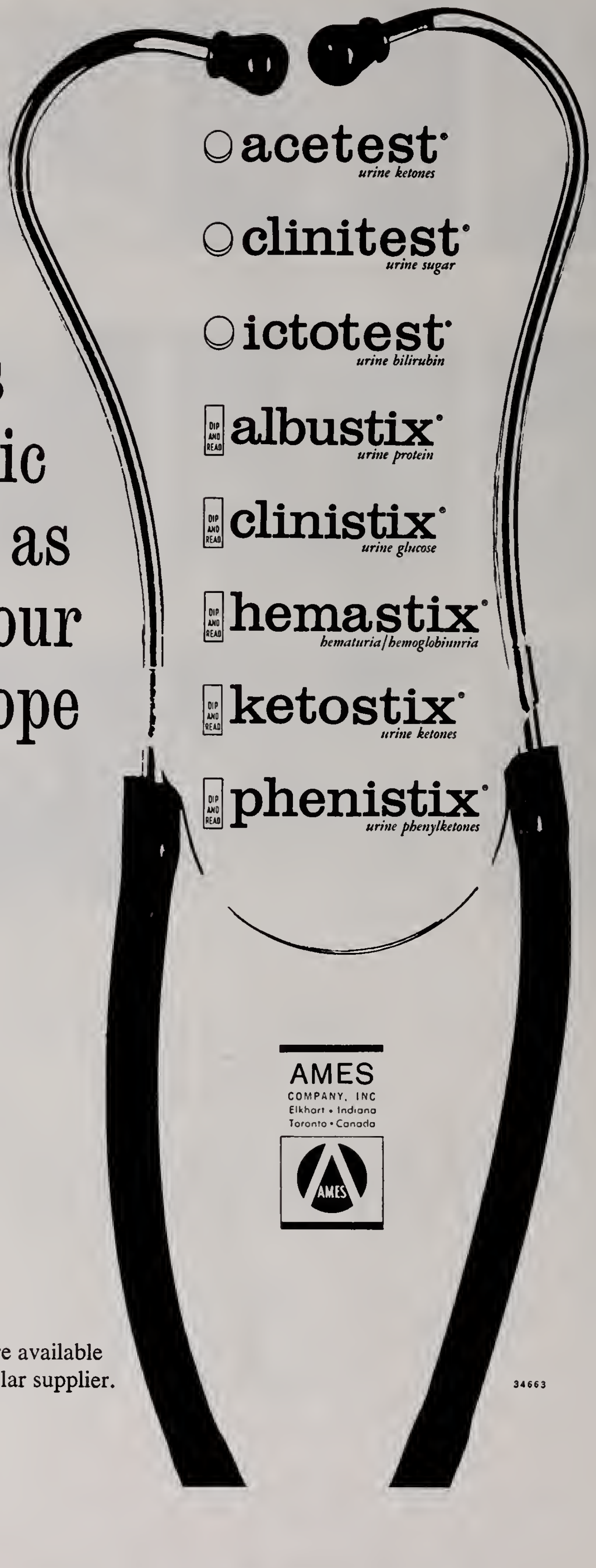

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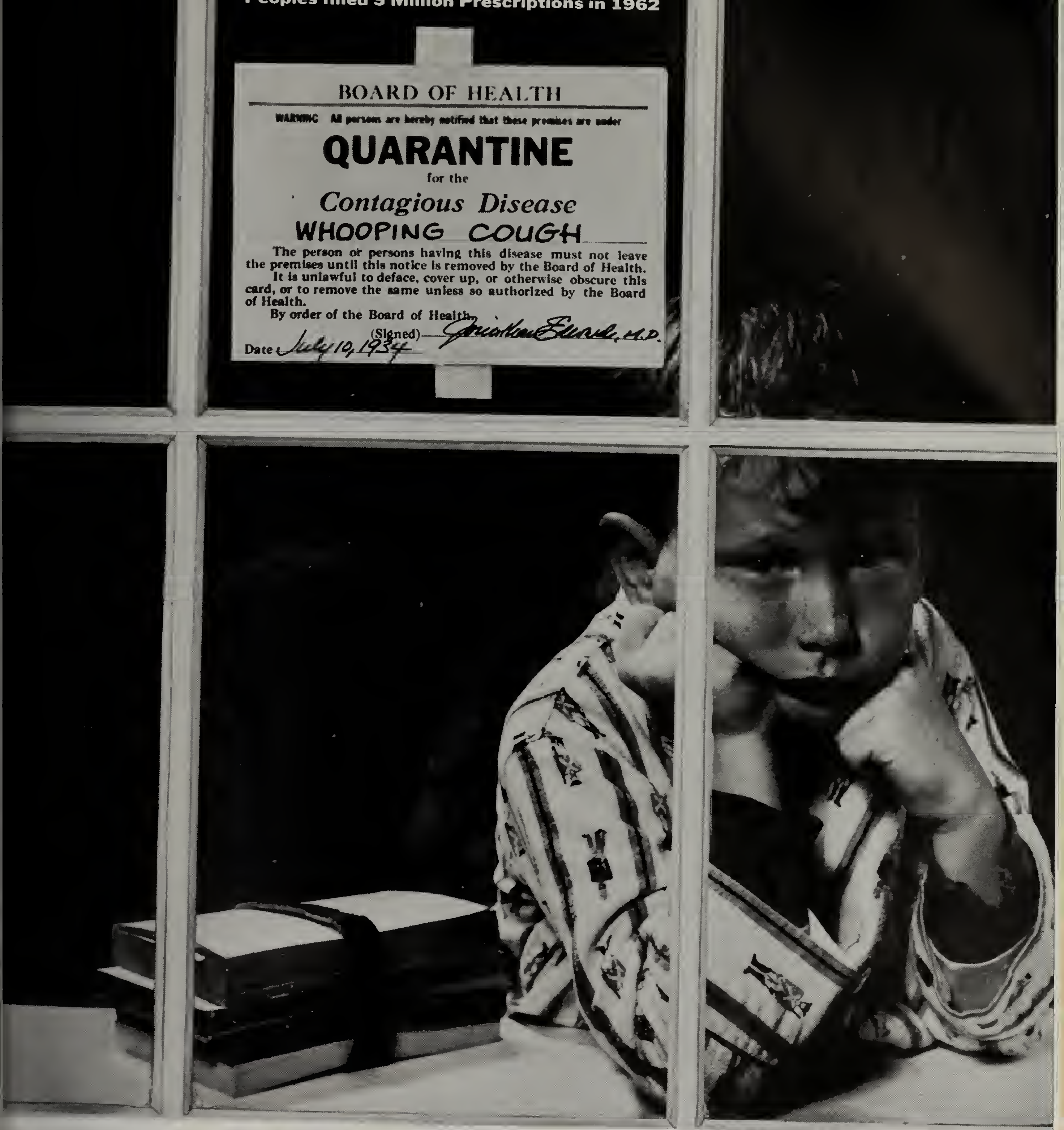

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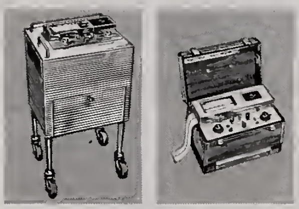

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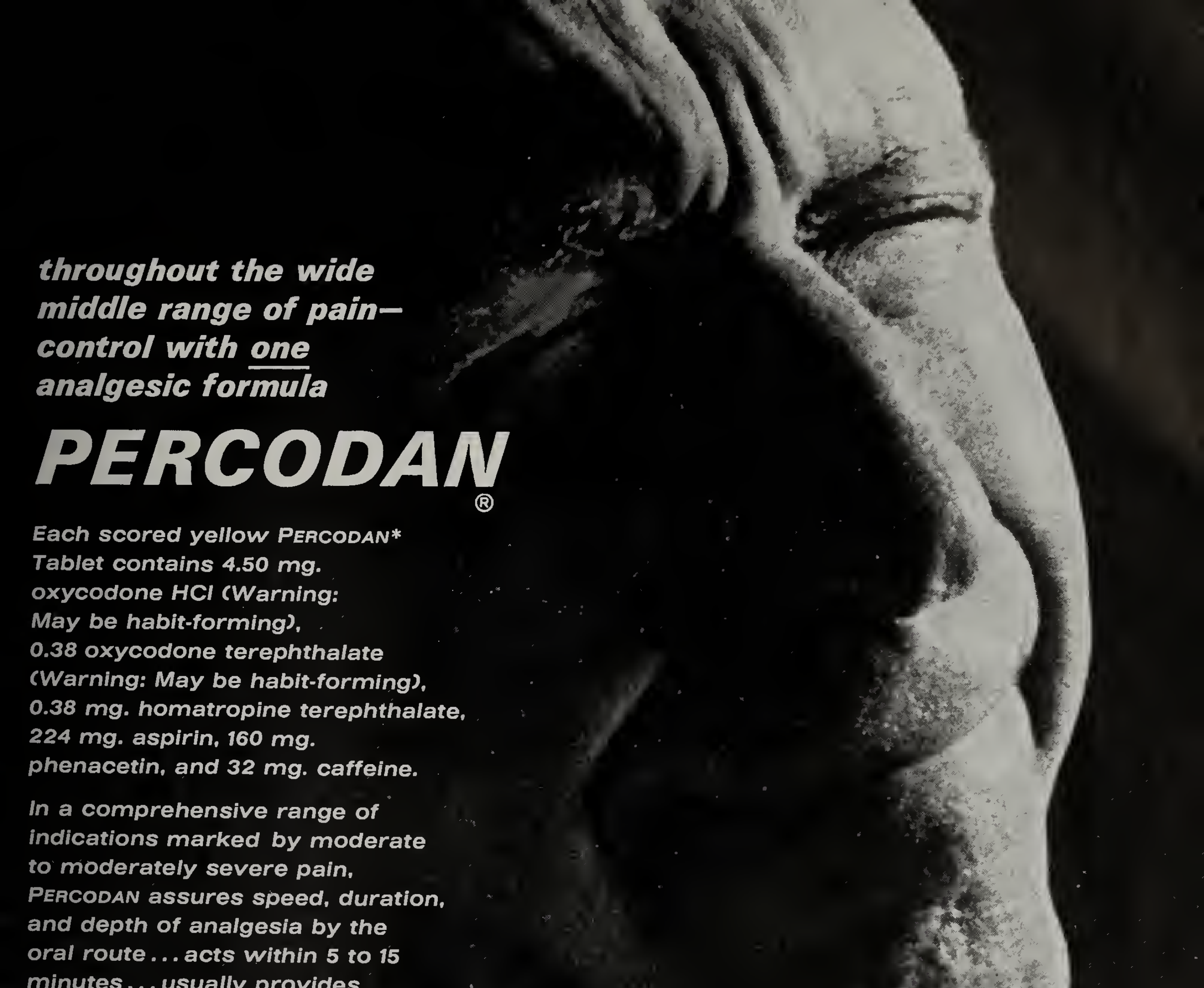

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* AMA Council on Foods and Nutrition: The Regulation of Dietary Fat, *JAMA* 181:411-423 (August 4, 1962).
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January 20–23: Hahnemann Medical College and Hospital Postgraduate Course on Cardiovascular Drug Therapy. Marriott Motor Hotel, Philadelphia. Address: Miss Sage Rosen, Executive Secretary, Postgraduate Education, Department of Medicine, Hahnemann Medical College and Hospital, 230 North Broad Street, Philadelphia 2, Pa.

January 27–29: Sectional Meeting, The American College of Surgeons. Lord Baltimore Hotel, Baltimore, Md. Address: Dr. Samuel J. Harbison, *Secretary*, 40 East Erie Street, Chicago 11, Ill.

January 30–31: Symposium on Scintiscanning in Clinical Medicine. Department of Radiology, Bowman Gray School of Medicine, Winston-Salem, N. C. Address: Dr. J. L. Quinn III, Nuclear Medicine, Bowman Gray School of Medicine, Winston-Salem 7, N. C.

February 29–March 5: International Academy of Proctology. Deauville Hotel, Miami Beach, Fla. Address: Dr. A. J. Cantor, 147–41 Sanford Avenue, Flushing 55, N. Y.

March 1–6: 20th Annual Congress of American College of Allergists. The Americana, Bal Harbour, Miami Beach, Fla. Address: Dr. John D. Gillaspie, *Treasurer*, 2141 14th Street, Boulder, Colo.

April 1–3: American Surgical Association. The Homestead, Hot Springs, Va. Address: Dr. W. A. Altemeier, *Secretary*, Cincinnati General Hospital, Cincinnati 29, Ohio.

April 3–5: American Association of Pathologists and Bacteriologists. Drake Hotel, Chicago. Address: Dr. John R. Carter, *Secretary-Treasurer*, University of Kansas Medical Center, Kansas City 3, Mo.

April 3–5: American Society of Internal Medicine. Atlantic City, N. J. Address: Mr. Albert V. Whitehall, *Executive Director*, 3410 Geary Blvd., San Francisco 18, Calif.

April 6–10: American College of Physicians. Chalfonte-Haddon Hall, Atlantic City, N. J. Address: Dr. Edward C. Rosenow, Jr., *Executive Director*, 4200 Pine Street, Philadelphia 4, Pa.

April 11–16: American Academy of General Practice. Convention Hall, Atlantic City, N. J. Address: Mr. Mac F. Cahal, *Executive Director*, Volker Blvd. at Brookside, Kansas City 12, Mo.

April 13–16: American Radium Society. Greenbrier Hotel, White Sulphur Springs, West Va. Address: Dr. Justin J. Stein, *Executive Secretary*, UCLA School of Medicine, Los Angeles 24, Calif.

May 11–14: Aerospace Medical Association. Americana Hotel, Bal Harbour, Fla. Address: Dr. William J. Kennard, *Secretary*, Washington National Airport, Washington 1, D. C.

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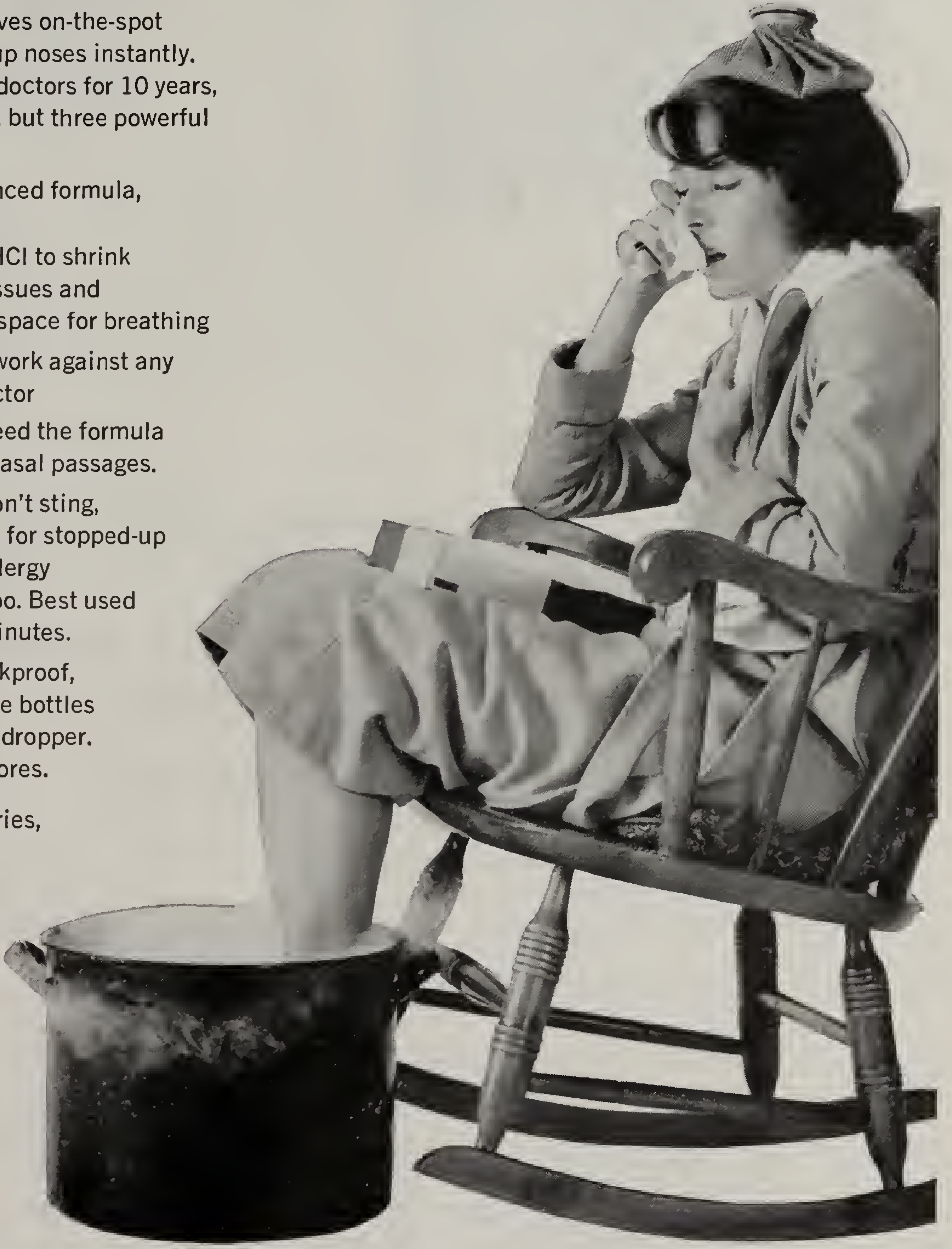

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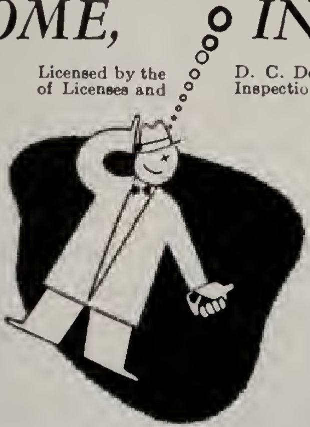

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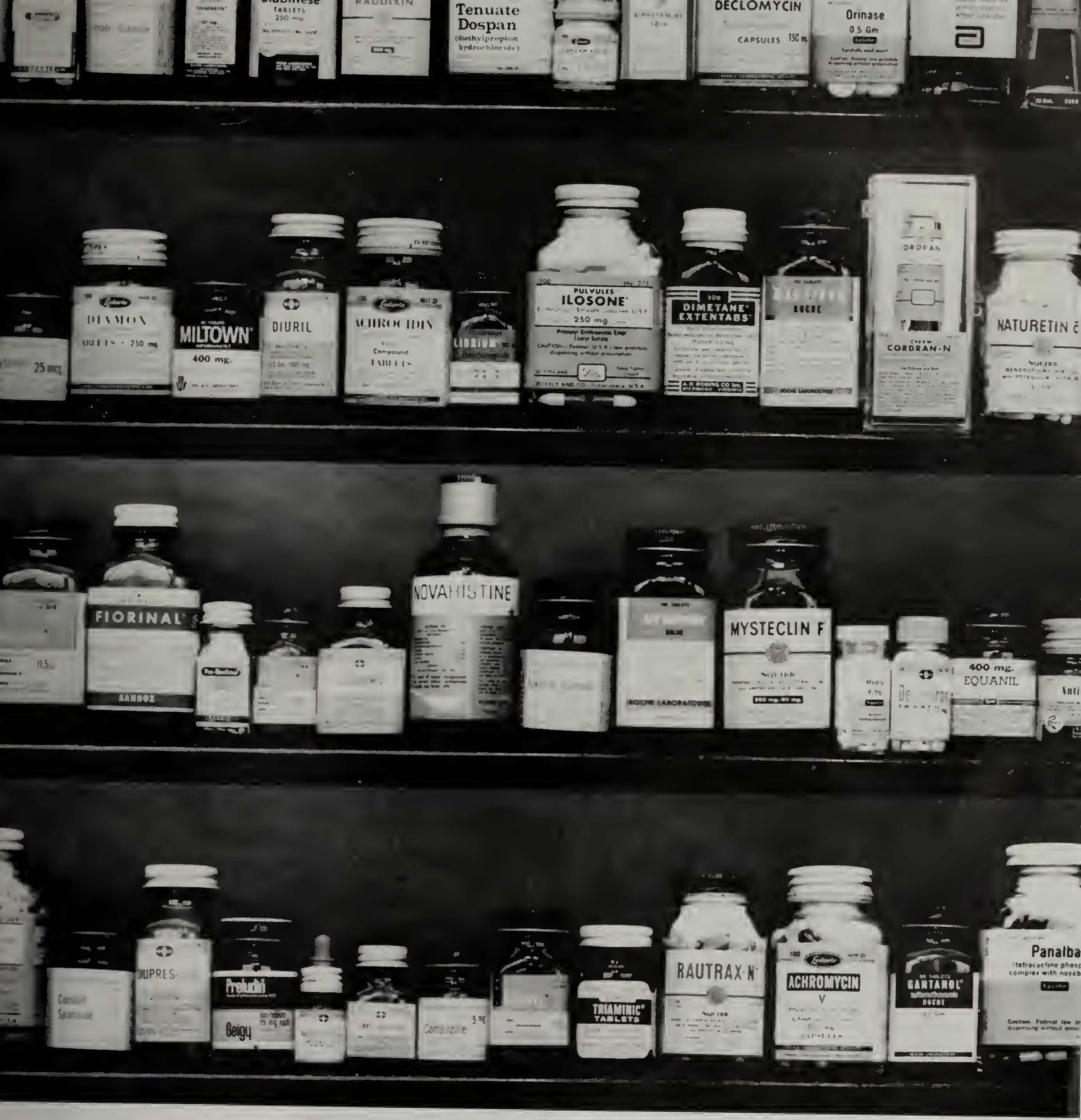
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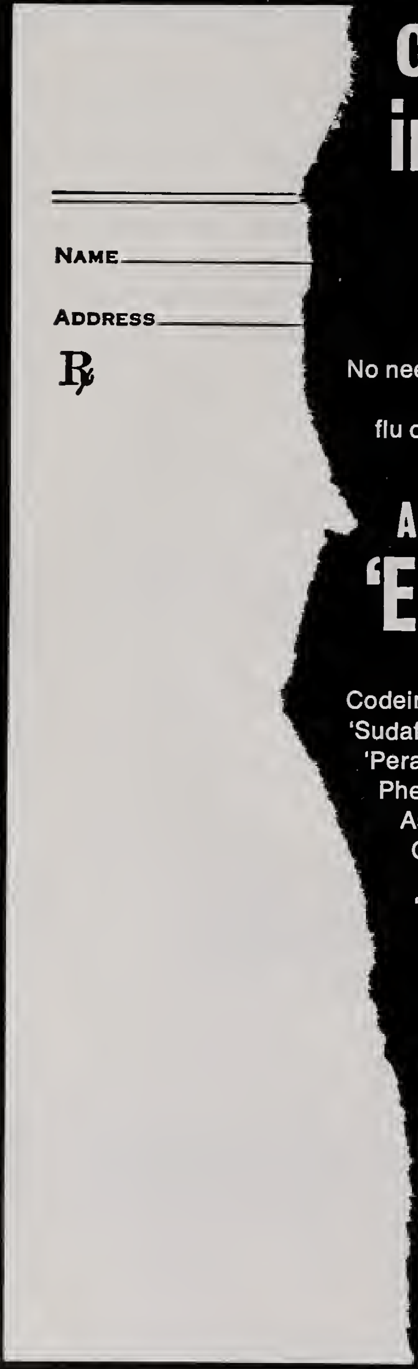

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